

Buyers' Directory of
The Rubber Trade
Page XLIII.

The BEST BUCKLES for ARCTICS
ARE MADE BY
THE WELD MFG. CO.,
41 Lincoln Street, - - Boston.

"Cravenette"
RAIN COATS

Must have this Circular
Trade Mark stamped in
inside of coat.....



INDIA RUBBER WORLD

CAOUTCHOUC

HEVEA BRASILIENSIS

DICHOPOPS GUTTA

GUTTA-PERCHA

Edited by HENRY C. PEARSON—Offices, No. 150 Nassau Street, NEW YORK.

Vol. XXVIII. No. 1.

APRIL 1, 1903.

35 Cents a Copy.
\$8.00 Per Year.

THE ALDEN RUBBER CO., BARBERTON RUBBER WORKS, MANUFACTURERS OF RUBBER GOODS.

The
MASTER KEY
Rubber Tiling.

Noiseless,
Non Conducting,
Non Slipping.

The ideal floor for
Offices, Banks, Vesti-
bules, Elevators and
especially for places
where electrical cur-
rents abound.

Beautiful Color Effects.
Designs Furnished.



THIS TRADE MARK GUARANTEES FULL VALUE.

BICYCLE,
AUTOMOBILE
AND
VEHICLE
TIRES,
HOSE,
PACKING,
VALVES.
MOLDED
GOODS,
FRUIT JAR
RINGS.
WHITE
TUBING.

CHLORIDE OF SULPHUR
AND BI-SULPHIDE
OF CARBON.
GE'

AKRON, OHIO and BARBERTON, OHIO, U.S.A.
Akron Office, Arcade Block—Main Office and Works at Barberton

LONG DISTANCE TEL., AKRON EXCHANGE
CABLE ADDRESS "ARCO AKRON."

Mention the India Rubber World when you write

LAMPBLACKS especially for RUBBER MANUFACTURE
SAMUEL CABOT, BOSTON, MASS

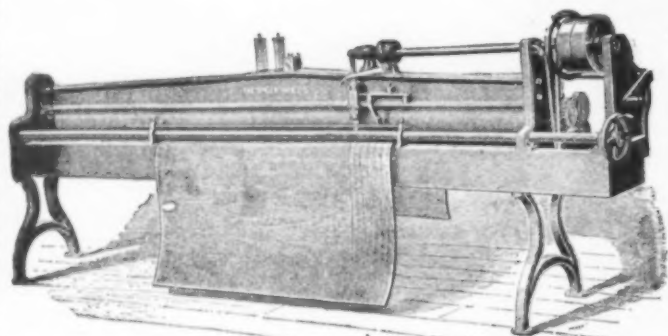
OUR SPECIALTY.
J. H. STEEDMAN & CO., INC.,
620 ATLANTIC AVE., - - BOSTON, MASS.
BOUGHT AND SOLD.

For Stitching Rubber Belting

HIGHEST AWARD AT COLUMBIAN EXPOSITION.

Machine No. 9-1: For Stitching Parallel Rows on Canvas or Rubber Belting.

POINTS OF EXCELLENCE.



- 1.—Two needles and two oscillating shuttles for forming two parallel lock-stitch seams in heavy canvas and rubber belting up to 100 inches wide and one and one-half inches thick.
- 2.—Powerful feed-roller 16 feet long, capable of carrying material of several tons' weight, have a bearing the entire width of the material, thus ensuring uniformity and regularity in carrying forward the several thicknesses and giving elasticity to the stitching.
- 3.—The mechanical arrangement for raising and lowering the upper feed roller by means of a horizontal shaft extending the entire length of the machine, connected with the hinged bearings of the roller by bevel gears at each end and so operated as to be easily adjusted to any thickness of material.
- 4.—Largest and strongest sewing machine ever constructed, having a bed eighteen feet in length, with overhanging arm supported by and attached to both ends of the bed.

Salesrooms in Every City.

Machines shown in practical operation at

NEW YORK—Broadway and Prince Street.

BALTIMORE—11 North Charles Street.

ST. LOUIS—1124 Olive Street.

BOSTON—128-132 Essex Street.

CHICAGO—260-262 Fifth Avenue.

TROY, N. Y.—251 River Street.

PHILADELPHIA—1210 Chestnut Street.

CINCINNATI—115 West Third Street.

INDIANAPOLIS—126 W. Washington St.

ST. PAUL—402 Jackson St.

THE SINGER MANUFACTURING CO.

BEST IN THE MARKET

Cable's Carriage Cloth

New Factory Buildings.

Prompt Shipments.

New Machinery.

Samples Freely Furnished.

CABLE RUBBER COMPANY,

70-72 ESSEX STREET, BOSTON, MASS., U. S. A.

Mention The India Rubber World when you write.

RESERVED

SEE OUR MAY ISSUE.

Y.





Published on the 1st of each Month by

THE INDIA RUBBER PUBLISHING CO.

No. 150 NASSAU ST., NEW YORK.

HENRY C. PEARSON,
EDITOR.HAWTHORNE HILL,
ASSOCIATE.

Vol. 28.

APRIL 1, 1903.

No. 1.

SUBSCRIPTIONS: \$3.00 per year, \$1.75 for six months, postpaid, for the United States and Canada. Foreign countries, same price. Special Rates for Clubs of five, ten or more subscribers.

ADVERTISING: Rates will be made known on application.

REMITTANCES: Should always be made by bank draft, Post Office Order or Express Money orders on New York, payable to THE INDIA RUBBER PUBLISHING COMPANY. Remittances for foreign subscriptions should be sent by International Post order, payable as above.

DISCONTINUANCES: Yearly orders for subscriptions and advertising are regarded as permanent, and after the first twelve months they will be discontinued only at the request of the subscriber or advertiser. Bills are rendered promptly at the beginning of each period, and thereby our patrons have due notice of continuance.

COPYRIGHT, 1903, BY

THE INDIA RUBBER PUBLISHING CO.

Entered at New York Post Office as mail matter of the second-class.

TABLE OF CONTENTS.

Editorial:	PAGE.
The Scalding of Mrs. Priest	215
The World's Dependence on Rubber	216
The Man with the Rubber Secret	216
Minor Editorial	217
Literature of India-Rubber	218
A Rival of "Para" Rubber in the East	219
[Based upon the report by Mr. Stanley Arden, of Selangor. With Notes on Progress in the Malay States, and a Map.]	
The End of the Bolivian Syndicate	221
[With Notes on the Boundary Dispute Between Brazil and Bolivia, and a Map.]	
The India-Rubber Trade in Great Britain	223
[Kramrich's Failure. Inferior Hotwater Bottles. Another Golf Ball Company. Electrical Notes. Drying of Washed Rubber. Volenite. Analysis of India-Rubber. Company Notes.]	
Rubber Planting and Exploitation	225
[Results of Rubber Tapping at San Miguel. New Mexican Planting Companies. "Ceara Rubber" in East Africa. Bolivian Rubber Co. of Baltimore.]	
India-Rubber Interests in Europe	227
[Higher Prices for Rubber Goods in Germany. The Name "Reithoffer" in Austria. Imprisoned for Stealing Rubber. Large Work in Cable Construction. The Dunlop Company and Motor Tires. A Second Rubber Journal in French. Kempshall Golf Balls in Great Britain. Moseley Preece Wedding. Notes.]	
The Only Rubber Book	229
[With Three Illustrations of Goodyear's "Gum Elastic" printed on and bound in rubber.]	
India-Rubber Goods in Commerce	230
New Goods and Specialties in Rubber (Illustrated)	231
[The Fish Detachable Vehicle Tire. Bailey's Duplex Massage Roller. "Mobilene" Packing for Automobiles. Automobile and Fishing Coat. New French Automobile Horn. New Rack for Garden Hose. Caulfield's Patent Grip Wheel. Telescopic Pocket Atomizer. Rubber Complexion Bulb. Goodrich Air Brake Hose.]	
Recent Rubber Patents (American, British, German)	233
New Trade Publications	234
Miscellaneous:	
Akron Rubber Factory Burned	217
Nicolas Suarez in the Acre War	222
German Electrical Consolidation	229
The Source of Pontianak	230
Success of a Young Engineer	230
The Largest Rubber Covered Roller (Illustrated)	235
Storage of Gasoline and Naphtha (Illustrated)	235
Great Promises that Failed	245
A Useful Rubber Code	246
The Textile Goods Market	245
News of the American Rubber Trade	237
The Traze at Akron	243
Personal Mention	244
Review of the Crude Rubber Market	246

THE SCALDING OF MRS. PRIEST.

IT is asserted frequently that the British people are much more inclined than are Americans to contend for their personal rights and privileges. The idea conveyed is that the average American will submit meekly to inconvenience and even injustice, rather than take the trouble to make a "kick," either to obtain a present remedy or to prevent a recurrence of the wrong. We do not purpose now to venture an opinion as to the justice of this comparison. But we are forced to admit that a certain case tried lately in the Northern Assizes of England, at Liverpool, involved a more vigorous protest by a British subject than we have ever known to be made, under like provocation, in the United States. And we note the case here with a view to observing that if the Liverpool precedent should secure general adoption, it would not be without a marked influence, in one branch at least, on the rubber industry.

In the legal proceedings at Liverpool, reported at length in *The Times*, of London, it appears not to have been disputed that one Mrs. Priest, the wife of a small draper, suffered one night from cramp. It was further admitted on both sides that in search of means for relief her husband went to a nearby chemist's shop and purchased, for three-and-sixpence, an India-rubber hotwater bottle, which, on returning home, he filled with boiling water and placed where it might be expected to do the most good. Before any benefit had been experienced the bottle burst, with the result that the lady not only was drenched in bed, but was painfully scalded. It probably will nowhere be asserted that the wife of the most pronounced American would not have made an instant and vigorous protest against a similar fate, but we believe that no such protest on this side of the Atlantic has taken the precise shape of that made by Mrs. Priest, with the support of her husband. What they did was to file a suit against the chemist—he must have been in business in a small way, since his stock of water bottles consisted of only two—claiming damages in the sum of \$4000.

The case was tried before Mr. Justice Walton and a special jury, the latter, by the way, disagreeing on certain points after having twice retired for deliberation. It involved so many questions of alleged negligence and breach of warranty by the vendor, that it was ten days before his Lordship was able to deliver his decision—which bristles with such a formidable list of citations of cases in British jurisprudence as must strike terror to the heart of any other chemist in a small way of business, having in stock a hot-water bottle, and thereby liable to incur a damage suit for \$4000 through its sale. It is true that the award to the plaintiff was only £40—in respect of the doctor's fee for treating Mrs. Priest's scald. But it is plain from the court's decision that, if certain allegations had been proved to the satisfaction of the jury, the amount might have been much greater, and it appears that these things were proved to the satisfaction of some of the jury.

The application of the case is this: If the failure of every hotwater bottle to hold hot water, whether in America or

Great Britain, was likely to be followed by such a vigorous complaint as arose in the house of the Liverpool draper, with the risk involved of a judgment for \$4000, chemists in a small way or a large way would refuse to handle such goods if not guaranteed by the maker, and the makers would not dare to send out bottles without first testing them thoroughly. And with this new condition of affairs, a similar course might follow in respect to garden hose, fire hose, tire inner tubes, and, ultimately, every class of India-rubber goods designed for holding or conveying liquids of any kind.

One further note to be made—for Mr. Justice Walton's decision may yet become of interest as a precedent—is that his Lordship held the hotwater bottle to be a technical article. That is, something which the ordinary purchaser could not be held to be a judge of, as one might be expected to judge for himself of a market basket or clothespins, and in regard to which dependence upon the vendor was necessary. The sale, therefore, of such an article for a given purpose implied a warranty, even if none was expressed. Let this rule once be applied to rubber goods in general—for few persons can judge them by appearance—and the sale of inferior goods will come to be classed with arson and other like things, the commission of which suggests courts and penalties.

THE WORLD'S DEPENDENCE ON RUBBER.

WE doubt whether there was any thought of India-rubber in the mind of Lord Kelvin when, at a dinner in London some time ago, in honor of Mr. George Westinghouse, he paid a high tribute to the American in crediting him with the widespread benefits which had resulted from the development of the railway air brake. Yet without the short pieces of India-rubber hose which link together the air brake apparatus of the several cars in a train, these benefits would not exist. The railway systems of the world represent an investment of capital vast almost beyond comprehension, and upon their successful working depend the lives of so many people and the safety of so much property, as to be at some time or other a matter of concern to almost every civilized being. In improving so many of the conditions involved, the air brake has proved of such great service that Lord Kelvin rightly declared it to have revolutionized the business of transportation by rail. He might have added that it is the few dollars' worth of rubber in the equipment of each train that has lifted railroading out of its primitive stages.

Not less marvelous than the extent of the steam railway systems is the great and multifarious development of the applications of electricity—involving thousands of millions of dollars in the means of transmission of intelligence, light, power, persons, and goods. Think of a single factory making and laying 37,000 miles of submarine cables in three years past; of the power of Niagara Falls being used to operate factories as easily as if it were only a toy mill race; of costly street railway systems in every city; with no end of other important electrical undertakings. But without insulating materials, at some point in every

plant or system, all the electricity would be as uncontrollable as the lightning in the clouds. And here the chief dependence is India-rubber, including the closely related substance, Gutta-percha.

To speak of smaller applications, lately the automobile has compelled attention on every continent—a vehicle which never would have been practicable but for rubber tires; without modern fire fighting apparatus the modern great cities could not exist—and rubber hose alone makes these possible; the world's growth in intelligence is enhanced by means of cheap printing paper, which calls for rubber rolls in its manufacture; certain important chemical results and invaluable surgical operations might still be unknown without the aid of rubber. The list already is too long to record here, while invention continues busy with additions to it.

Rubber is thus a necessity to man in a sense in which there is none more truly so among industrial materials, though the use of some others may exceed it in volume and money value. There is no need, therefore, for misgivings as to the future of the rubber goods industry, or as to the coming demand for the raw material. If the past is any earnest of the future, there is no industrial field which offers more promise to the beginner in life looking for a career. There never was before so great a demand for men who understand rubber and how to utilize it, and every decade finds the field less crowded, relatively. Men who are living to-day can remember when shoes were the chief product of the rubber industry, and when at times means had to be taken to prevent over production. But more rubber inventions are patented now every week than in a year, half a century ago, and doubtless as large a proportion of them proves of value. There have been novelties in rubber developed recently which have yielded more profit in a year than Charles Goodyear netted altogether from his epoch making discovery, and there is no sign that the last invention has been made in this field.

THE MAN WITH A RUBBER SECRET.

HE appears almost every week, and is usually clothed in an air of mystery that instantly impresses the beholder with the enormous value of his discovery. In the beginning he is most reticent, but after a little the need of sympathy unlocks his lips, and he lays bare his thoughts, hopes, and aspirations. The first part of his confession is very apt to relate to the secret machinations of the "rubber trust," which had attempted to secure his process for its own upbuilding and with no advance payment of the large moneys that the use of his product would mean to them. This is the time to wax sympathetic. A little damning of the trusts, considerable appreciation of the inventor's astuteness, together with a look of whole souled honesty, never fails to bring forth a sample of the mysterious product. It is usually an evil smelling compound which may or may not have a certain use as an adulterant, but which rests wholly on the rubber added to it for value, and yet to its creator's mind is better than rubber. After having seen it, as a rule, one's spirits fall, and the thought of escape obtrudes itself. A sense of fairness, however, acts as a restraint, while the inventor quizzes for information about compounds, about rubber factories, individually and collectively, regarding purchasing

agents, and in fact extracts all the information that years of experience have accumulated. A final question, how best to obtain a market, how easiest to draw it to the attention of the world, is answered by a timid suggestion regarding the insertion of a card in the accredited organ of the rubber trade, to be paid for at the very reasonable rate appended to the contract. Here appears the first sign of escape. A look of distrust appears in the creator's eyes, which he hides behind an embarrassed laugh, and, thanking you hastily, he seizes his sample and disappears.

ONCE UPON A TIME we published an article explaining why certain rubber manufacturers had not engaged in making tires, but had left to their competitors all the possible profits in this then new branch of the rubber industry. Without repeating here the various reasons referred to, we may note that a distinctly different and novel reason kept the "International Wheel, Tire, and Rubber Manufacturing Co."—of which some account appears on another page—from making any tires. The reason is very simple, when it is once understood. Instead of laying out money for plant, raw material, labor, and selling expenses, the management simply pocketed all the cash supplied by shareholders. In this way all risk of loss in trading was avoided, and every dollar that came in was so much profit for the promoters. This left the shareholders out of consideration, of course, but the shareholders didn't plan or organize the company, or otherwise use their brains in connection with it, and the promoters, who had done all the work, evidently considered themselves entitled to all the profits. Besides, who knows that any profit would have been made if the shareholders' money had been risked in actually running a tire factory?

IF BRAZIL SHOULD SUCCEED in establishing her claim to the Acre district, after having caused the Bolivian Syndicate to relinquish its plans for development there, this alone can neither help Brazil nor give any great impetus to the exploitation of rubber along the Acre. What rubber will be gathered will be the product of the intermittent efforts of many small operators, not working in concert, and contending against disadvantages and lack of facilities which can be overcome only by the investment of large capital for systematic improvements, on plans requiring years for their full development. To-day much Bolivian rubber is carried for long distances on muleback or floated over rapids in rivers, which should be conveyed by railways or through canals, constructed to obviate the obstructions in the extensive system of natural waterways. The history of native enterprise in the rubber regions of Brazil gives no promise that any of these things will ever be done without the aid of outside capital, outside enterprise, and outside direction. All of which means that if the Acre rubber fields, after being conceded to belong to Brazil, are to be opened on a comprehensive scale, Brazil must adopt some such course as Bolivia planned to follow, and place the district at the disposal of a foreign syndicate on terms that will justify the investment of the capital requisite for the work to be done. That is to say, the Brazilians on the Acre will then be under foreign control just as much as if the development syndicate were operating under a charter from Bolivia.

THE PROJECTED ISTHMIAN CANAL is not a matter of immediate concern to any branch of the rubber interest, though ultimately it may have an important bearing upon the production of rubber. The canal route traverses a section of the rubber producing zone which has been well denuded of the native supplies, but which may offer advantages for the forming of planta-

tions after the new means of transportation has made that region more accessible. What is likely to prove more important is the greater accessibility of the Pacific coast by reason of the canal, and the consequent development of the rubber resources which lie nearer to the western than to the eastern coast of South America. The canal will not be built to-morrow, however; with the greatest possible expedition ten years will be required for the work, after the enterprise emerges from its present stage—that of diplomatic negotiation.

BEGINNING with the May issue of THE INDIA RUBBER WORLD, there will appear the first of a series of articles, entitled "A Trip Through the Tierra Caliente," which will be a record of the personal observation of the Editor during a recent trip to the rubber plantations in southern Mexico. The articles will be well illustrated, and will describe typical plantations and the various conditions that surround the pioneer work in the country named.

AKRON RUBBER FACTORY BURNED.

THE factory of The India Rubber Co. (Akron, Ohio) and all its contents were completely destroyed by fire on the afternoon of March 26. The plant was in ruins in less than an hour from the discovery of the flames. The company occupied a three-story brick building, the main portion of which was 200 × 60 feet, and a wing 150 × 100 feet. It was in the mixing department that the fire started. A boy was pouring gasoline from a cup into a can. His elbow came so close to an electric belt that a current shot through his arm and a spark from the end of his finger ignited the inflammable liquid. He dropped the can and cup and an explosion followed. Almost instantly the fire had communicated to an elevator shaft and virtually from the first was beyond control.

The flames had gained great headway before an alarm could be turned in, and although the fire department made heroic efforts to save that portion of the building in which valuable stock was stored, nothing effectual could be done but preserve adjoining property from destruction. A frame dwelling standing between the ruined factory and the office of the company would certainly have burned but for the changing of the wind to the north, carrying the flames away from this structure, and had the fire communicated to this house the office would have been destroyed. All the employees escaped in safety.

The loss is placed by W. L. Wild, the treasurer and manager, at \$200,000, approximately, as follows: On stock, \$90,000; on machinery, \$60,000; on buildings, \$50,000. The aggregate insurance is nearly \$150,000. The burned buildings, except for additions which had been made, were originally a part of the Empire Mower and Reaper Co. plant and were purchased by The India Rubber Co. soon after their organization. Whether they will be rebuilt is to be determined when President Parker, of the Rubber Goods Manufacturing Co., with which the India Rubber Co. were identified, reaches Akron. The company were very busy, night and day, in their tire departments, and the loss in trade will be heavy. The factory employed 300 people.

The India Rubber Co. was incorporated in November, 1895, as the Akron India Rubber Co., and in 1896 under the present name, with \$100,000 capital. In 1899 it was merged into the Rubber Goods Manufacturing Co. Charles H. Wheeler, at first treasurer of the company, and later president, resigned official connection with the company at the annual meeting in January last. He was during the whole time general manager, and as the result of his capacity and energy, with capable assistance a good business had been built up, especially in vehicle tires.

LITERATURE OF INDIA-RUBBER.

INDIARUBBER AND GUTTA PERCHA. A COMPLETE PRACTICAL Treatise on Indiarubber and Gutta Percha in their Historical, Botanical, Agricultural, Mechanical, Chemical, and Electrical Aspects. Translated from the French of T. Seeligmann, G. Lamy Torrilhon, and H. Falconnet. By John Geddes McIntosh, late lecturer on the chemical technology of gums, resins, etc., The Polytechnic, Regent street. With 86 illustrations. London: Scott, Greenwood & Co. 1903. [Cloth. 8vo. Pp. 403. Price, 12 shillings 6 pence.]

THE merit of this work in the original ("Le Caoutchouc et la Gutta-percha." Paris: 1896) was too little recognized, owing to the fact that French, although the medium through which so many scientific discoveries have been given to the world, is certainly not the language of the rubber industry. Its practical character is indicated by the fact that the authors were, respectively, a well known technical chemist, an equally well known India-rubber manufacturer, and an expert mechanical engineer, with special experience in rubber machinery. The translator, by the manner in which he has completed his task, likewise displays a knowledge of his field, enabling the English reader now to benefit from whatever of value is possessed by the original work. Besides, the translator has, by means of footnotes and otherwise, added matters of value, and, by converting French measurements into British units, rendered the work more serviceable to its new circle of readers.

This work deals with the botany of rubber, the sources and properties of the various commercial grades, with the bearing upon the quality of the product of the methods of extraction and coagulation. There are very full data of the physical and chemical analyses of the different rubbers. Next are considered in detail the mechanical treatment of rubber in the factory and the processes of vulcanization; the compounding of rubber; the testing of rubber goods; and the reclaiming of rubber and the manufacture and use of substitutes. The illustrations given relate both to the botanical section and to numerous machines and appliances for the factory. Several of the machines illustrated are described as being of American manufacture. Part II of the work, containing nearly 100 pages, and on the same general plan, is devoted to Gutta-percha.

One purpose distinctly disavowed by the authors of this work has been a description of the method of manufacture of the various lines of rubber goods. Regarding certain manuals of technology, the authors say that they could never understand the utility of such books. In spite of evident good faith they often result in giving false ideas to the beginner, while "causing the experienced, practical man to shrug his shoulders." Nevertheless, our authors announced that they might attempt, in a later volume, to give as complete a monograph as possible of the various industries into which rubber enters, but after seven years no indication has appeared that any such book has been begun.

Tables of production and prices, a bibliography, and a revised and enlarged index, complete the book. It could be wished that the bibliography, which is the original compilation, translated into English, had been brought up to date. The statistical tables, likewise, are brought up only to the end of 1894. It is rather singular that the translator should have repeated the error in the original work of attributing the discovery of vulcanization to "Nelson," instead of Charles, Goodyear.

A TRAVERS L'AMÉRIQUE ÉQUATORIALE. LE PÉROU. PAR AUGUSTE Plane, Chargé de missions commerciales. Paris: Plon-Nourrit et Cie. 1903. [Paper. 12mo. Pp. 111 + 247 + 23 plates.]

THE author of this book, the engineer of the well known rubber factory of Michelin et Cie (Clermont-Ferrand), was engaged for three years on a geographical and commercial mission in South America, part of the results of which are here recorded, the remainder being promised in another volume, "L'Amazone." The object of the mission was to determine

the nature of the resources of and the opportunities for development in, eastern Peru, the basis of which development is largely India-rubber. The present volume relates chiefly to M. Plane's exploration of the river Marcapata, an affluent of the Inambari, which in turn discharges into the Madre de Dios, and that into the Beni. The starting point of this particular exploration was just east of the city of Cuzco, in Peru, and reference to a map will indicate the trend of the valley, from the village of Marcapata to the mouth of the Beni. The Marcapata valley, according to our author, contains both *Hevea* and *Castilloa*, not to mention gold, and the land is suitable for growing coffee, cacao, and food products for laborers. But from all the facts stated it is evident that successful development would be possible only with enterprises on a sufficiently large scale to justify the creation of means of transportation. While "Le Perou" does not point the way to immediate opportunities for wealth, the book is a valuable contribution to knowledge of the region explored, on account of the author's painstaking devotion to detail in recording his observations of the topography, climate, soil, productions, the people and their customs, and the means of access to and egress from the points he visited. His descriptions of the denseness of the virgin forests of Peru are discouraging, but not more so than those which the explorer Stanley gave of forests on the Upper Congo which now are being made to yield rubber in large quantities. One hopeful feature is the mention of the rubber exports from Iquitos (Peru), much of it from similar forests, which amounted to 1,993,637 pounds in 1900 and 2,722,658 pounds in 1901. Later reports show this traffic in 1902 to have amounted to 3,637,178 pounds. The care with which M. Plane's party studied their field is indicated by their stopping at one place and establishing a *seringal* (rubber camp)—for which a full rubber collecting equipment had been provided—where three *estradas* (paths) were opened and worked for eight days, and notes taken of the results of various methods and of the yield of rubber. Twenty-three full page illustrations, from photographs, afford a helpful addition to the text of the book.

IN CURRENT PERIODICALS.

LE Caoutchouc au Rio Beni. By P. Cibot. [Relates to details of extraction and coagulation of latex.] = *Journal d'Agriculture Tropicale*, Paris. III 20 (February 28, 1903.) Pp. 35-38

La Culture des Arbres à Gutta et la Sélection Chimique. [Based on the work of van Romburgh and de Haas in Java.] = *Journal d'Agriculture Tropicale*, Paris. III-19 (January 31, 1903.) Pp. 11-13.

OTHER PUBLICATIONS RECEIVED.

RULES FOR INSTALLING ELECTRIC LIGHT AND POWER APPARATUS, consisting of the "National Electric Code," with Explanatory Notes. Eighth edition, August, 1902. [Paper. 16mo. Pp. 107]

ISSUED by the inspection department of the Associated Factory Mutual Fire Insurance Companies, No. 31 Milk street, Boston, Massachusetts. These rules are in force in insurance written by the Rubber Manufacturers' Mutual Insurance Co., as well as by the other factory mutual companies. They are also of interest in connection with rubber on account of the detailed specifications given with respect to the insulation of electric wires for every purpose in factory equipment.

"THE ELECTRICIAN" ELECTRICAL TRADES DIRECTORY AND Handbook for 1903. London: The Electrician Printing and Publishing Co., Limited. 1903. [Cloth. 2 vols. 8vo. Pp. 1482 + CCXIV. Price, 12 shillings 6 pence.]

THIS standard publication has now reached its twenty-third year of issue, forming for the period since its establishment an invaluable record of electrical progress, not only in Great Britain but for all countries, with a directory corrected annually to the latest possible date of electrical engineers and manufacturing companies. These volumes form likewise a useful compendium of electrical data fitted for convenient reference.

THE RIVAL OF "PARÁ" RUBBER IN THE EAST.

THE report on *Hevea Brasiliensis* in the Malay peninsula, by Mr. Stanley Arden, of Selangor, noticed in the last issue of this journal, besides being an interesting contribution to the history of rubber cultivation, is of real value on account of the practical information it contains. The report is of particular interest in that it records the assured success of the introduction of the "Pará rubber" tree into the Far East, thus extending the field available for the production of the world's best grade of rubber. The Amazon valley is broad enough, it is true, to meet every requirement, but there are drawbacks to the development of much of that region which may lead in time to the supplying of any increased demand for Pará rubber from regions more habitable by civilized people.

This possibility early began to appeal to the interest of the British in India, and Sir Clements Markham, C. B., F. R. G. S., has given in THE INDIA RUBBER WORLD* an account of the first introduction of exotic rubber species into India, under his direction as a member of the government. The first results, however, were not encouraging, and Mr. Gustav Mann, after an official connection with the Indian forestry service of thirty-three years, gave expression in THE INDIA RUBBER WORLD† to what became a generally accepted opinion in relation to rubber planting, as follows:

The acclimatization of American rubber trees in Asia has not been a success, and, generally speaking, I am now inclined to think that all rubber plants had better be grown in the countries in which they are indigenous, particularly so since land for cultivation in those countries is available and even abundant.

While the initial planting of *Hevea* in India did prove a complete failure, better results were obtained from the beginnings made in Ceylon and the Malay states; that is, the seedlings rapidly developed into vigorous trees. But, as Mr. Arden says, very little interest was taken in rubber by planters, presumably on account of the high prices then ruling for coffee, which also afforded an earlier return than was possible in the case of rubber. "But with a decline in the price of coffee, planters began to look for other cultivations, and during the season 1896-97 the planting of rubber was taken up seriously. Since then its cultivation has received great attention, and there are at the present time, in the Malay peninsula alone, at least 12,000 acres planted with *Hevea*, representing about 1,500,000 trees, presumably the whole being the progeny of the trees originally introduced by the government of India (in 1876)."

The opinion has prevailed, and quite naturally, that any rubber species would require, for its successful cultivation, the conditions of soil, climate, etc., peculiar to its native habitat. The conditions found on the margins of the Brazilian waterways clearly do not exist in the Malay states, but this fact has not interfered with the satisfactory growth there of *Hevea*. Mr. Arden says:

From reports to hand it will appear that this tree naturally affects swampy places; but here it thrives in any locality—at low elevations, and on almost any kind of soil. Swampy districts or places that are periodically inundated are not essential to success, and fine specimens are to be seen growing in what generally would be supposed to be the most undesirable spots. A good tree, for instance, is growing in the Penang botanic gardens on a dry stony bank, and although probably much smaller than if grown under better conditions, this tree has given an

average annual yield of over 2½ pounds of rubber from the eleventh and fifteenth years of its existence.

Mr. Arden writes further: "There are many instances of plants succeeding much better in the country of their adoption, and the orange may be cited as an example: this plant, although indigenous to eastern Asia, succeeds no where so well as it does in southern Europe and California."

It appears, however, that a mistaken view may have been held of the conditions of the growth of *Hevea* in Brazil. In fact, attention lately has been called to a note by Mr. H. A. Wickham, the agent who procured in Brazil the original seed of *Hevea* planted in India.‡ He reported finding rubber trees in high lands as well as on the river margins. "I cannot but imagine," he says, "that the original locality of the tree was in these uplands." The fact of their generally being found in the lowlands he explained by the likelihood of the seeds being carried in the rainy season down innumerable ravines and gullies into the rivers, to be cast up by tides and windy squalls, and readily taking root on the rich soil of alluvial islands and shores of back waters. He regarded it a natural mistake that travelers who passed up and down the great waterways, without having penetrated into the high lands, to suppose *Hevea* to be confined to the low and frequently flooded shores and islands. But he had found the largest trees inland, and it now appears§ that all the seeds collected by Mr. Wickham were gained from immense trees on the tablelands.

The growth of *Hevea* in the Malay states is rapid, Mr. Arden having measured an acre, 161 trees 3½ years old, averaging 17½ inches in girth, a yard from base, while an acre of 4 year old trees averaged 22½ inches in girth. Some of the trees were 30 feet high. Seven year old trees reported on by him averaged 26.2 inches in girth and trees ten years old, 39 inches.

In the experimental tapping done by Mr. Arden, the implement found most satisfactory was a sharp pruning knife, which was used to form "herring bone" incisions, as shown in the diagram, under which a small tin cup was placed to receive the latex. Regarding coagulation by smoking, Mr. Arden writes:



Rubber prepared by this method still commands the highest price of all native cured rubbers in the market, but whether the "Pará" rubber so prepared will continue to occupy the premier position when pitted against rubber coagulated on more scientific principles is very doubtful. There will probably be a certain amount of conservatism to break down, as is generally the case when a new product makes its appearance on the market, but we may rest assured that so long as rubber continues to be used for the manifold purposes it is at present, that it will always command a remunerative figure; and when prepared free from all foreign matter, and shipped in as dry a condition as possible, the probabilities are that it will eventually oust the "Pará" rubber of to-day from its present position, for purity and freedom from moisture are what the manufacturer most desires.

The tins in which the latex is gathered are first supplied with a little water, in order to delay coagulation. After straining the collected latex, to remove bits of bark, etc., acetic acid is added—a teaspoonful to a pint of latex—and the whole stirred a few seconds. The mass soon assumes the consistency of thick cream, when it is poured into enamelled plates. After

* March 15, 1894—pages 165-167.

† February 10, 1897—page 115.

‡ Indian Agriculturist, March 1, 1897.

§ Communication in the London Contract Journal, late in 1902.

three or four hours the rubber, in the form of a thin solid cake, and of a pure white color, may be taken out of the dishes and subjected to pressure, Mr. Arden believing that for this purpose "something after the style of the old fashioned English wringing machine will probably be found as effective and inexpensive as anything that can be devised." The cakes are then dried for a week or ten days on rattan caned benches, care being taken not to allow mold to accumulate on the rubber.

In his experimental tapping, Mr. Arden did not make fresh incisions each day, but simply reopened the original wounds repeatedly, for six, eight, or a dozen times, in some cases on as many consecutive days, and on other trees on alternate days. In this way there is less injury to the tree than when fresh incisions are made each day, and he believes the yield of latex to be equally large. In fact, he is inclined to think that it is larger, since the tendency of the latex appears to be to flow toward any wound in the bark, and by making only a single wound, the total flow of latex is concentrated at one point.

A number of pages of the report are devoted to recording results of tapping trees of various ages, from $3\frac{1}{2}$ to 11 years, by various methods, at varying intervals, etc., with a view to determining the best practice. Without considering all these details, it will suffice here to state that in a table of estimates with which the report concludes, of the probable cost and possible returns from a plantation of *Hevea*, Mr. Arden states that an acre planted with 108 trees should yield 150 pounds in the ninth year and 200 pounds in the tenth, with a prospect of an increase as the trees become older. Mention is made of 5 pounds $6\frac{1}{2}$ ounces of rubber having been obtained from one tree 10 years old. Based upon his tapping of younger trees, he estimates a yield of 25 pounds in the fifth year as possible, and 52 pounds in the sixth. It should be said that low priced labor is abundant in this region, and that the work of rubber cultivation is being conducted on established plantations, laid out originally for coffee, and that none of the conditions obtain of a newly settled country. All of this contributes to a low cost of product, while the good quality of the rubber made enables the highest current prices to be obtained for it. It does not follow, however, that similar financial results would be possible in all other countries suited to the growth of *Hevea*. These very facts, however, of cheap native labor in accessible districts, under a salubrious climate, are calculated to develop a new source of "Pará rubber" in the old world as preferable to the introduction of labor from the Orient, as has often been suggested in Brazil, into fields so remote and inaccessible as the upper Amazon districts.

PROGRESS IN THE MALAY STATES.

THE rate of progress in the Malay states since coming under British control makes the prospects in that region most favorable for planting enterprise, and leads to hopes with regard to the future of rubber cultivation there, which, only a few years ago, could not have been entertained—apart from the fact that the adaptability of the *Hevea* to Malaya has only just been demonstrated. It is not yet thirty years since the first steps were taken in what has led to British protection over certain of the native Malay states. In 1896 four of these states, still retaining their native sultans—Perak, Selangor, Negri Sembilan, and Pahang—became federated, with the advice and protection of a British resident general, since which time marked improvement in many respects has been made. Protection to life and property is now assured; highways, railways, telegraphs, public works, and irrigation systems have been introduced; and population and wealth have increased. The following government returns will indicate to some extent what development is being made—values stated in silver:

	1881.	1891.	1901.
Revenue	\$1,025,753	\$4,572,310	\$17,541,507
Expenditure.....	960,790	5,554,800	17,273,158
Imports.....	3,289,266	14,889,942	39,524,603
Exports.....	3,032,469	18,495,554	63,107,177

The population, as shown by the two censuses that have been taken, increased from 428,218 in 1891 to 678,595 in 1901. The Malaysian tin deposits, which seem inexhaustible, are the most important in the world, and supply the greater part of the total demand. There are also gold, iron, and coal deposits. The government exacts a royalty on tin exports, the proceeds of which are devoted to building railways and other public improvements. These railways, thus built without expense to the people, have yielded a profit on operation from the beginning. In many other ways has the changed condition of this region—until recently in a wholly primitive state—rendered it more attractive for exploitation by Europeans, and one result has been the building up of an important planting interest. The number of native tropical products of economic



POSITION OF THE MALAY STATES.

value is nowhere exceeded in an area of the same limits; the alluvial soil is of great richness; and the supply of labor, while much remains to be done in adapting it to European supervision, is ample. It does not seem extravagant, therefore, if the planters who have given careful study to the subject, should entertain hopes that this country may yet prove an important rival to the remote reaches of the upper Amazon as a source of the world's best grade of rubber. In the state of Selangor alone, at the end of 1901, the extent of private plantations of rubber was reported at 7487 acres. The work of planting is known to have since been continued.

The new protectorate above mentioned is administered in connection with the British crown colony of the Straits Settlements, created in 1867, and including the island and port of Singapore—at the extremity of the Malay peninsula. It may be added that the first discovery of rubber outside of America was made in Penang, and the first discovery of Gutta-percha was made on the peninsula, which since has continued to be an important source of the supply.

THE END OF THE BOLIVIAN SYNDICATE.

THE group of financiers known as the Bolivian Syndicate has been dissolved and the "Acre Concession" is a thing of the past. As for the boundary dispute between Brazil and Bolivia, which this concession was the means of reviving, it is based now upon precisely the same conditions that existed before. The final act of the Bolivian Syndicate was the acceptance of a cash indemnity from the Brazilian government, the amount of which, as yet, is known only to the parties to the transaction. Brazil has not bought anything, but simply has paid the holders of the concession from Bolivia to get out of the Acre territory. The *cessionnaires*, by their acceptance of the money, renounce all rights or claims under the Bolivian grant, leaving the boundary question to be settled without their having to be considered. Brazil can claim no rights under the concession, because by the terms of the grant a company with not less than \$2,500,000 capital was to be formed within a given period for working the concession, and, such company not having been formed, the concession has been terminated by the lapse of time. The failure to organize the company, of course, was owing to the difficulties raised by Brazil.

It is true that Brazil may consider her title to the disputed territory to be stronger by reason of the payment made to the Syndicate, and Bolivia may protest that the acceptance of an indemnity by the *cessionnaires* was in violation of the terms of their grant. But they have the money, the concession has died a natural death, and whenever the boundary dispute comes up for arbitration, the question will be merely one of interpretation of the terms of an old treaty between Brazil and Bolivia. The boundary line agreed upon was to start from a fixed point (never in dispute) and run westwardly to the "source of the Javary"—a region which had not then been explored—and ever since each country has been claiming more territory than the other has been willing to concede. The task for arbitration is to fix the boundary line by locating the source of the river Javary. But however the line may be drawn, it can hardly be so far south as to give to Brazil a very great share of the so-called Acre district.

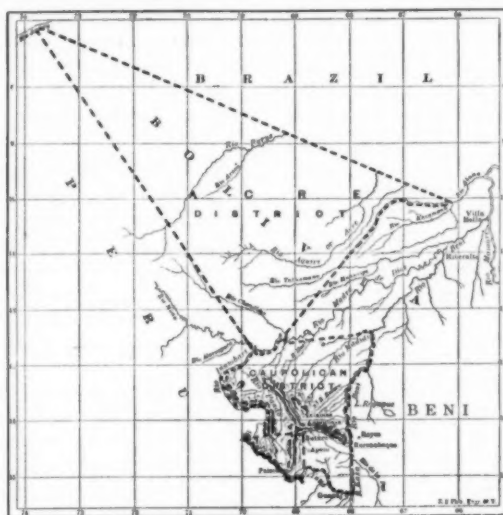
It has been asserted in behalf of Bolivia that she possesses historic rights to territory far north of the treaty line. But her object in respect to that treaty was twofold: To delimit the boundary and to secure water rights to the seaboard through Brazilian territory, her only natural outlet. In order to obtain an open waterway the Bolivian commissioners, it is claimed, were disposed to be liberal in the matter of land—then not regarded so valuable as now—and met the wishes of Brazilians in respect to fixing the boundary, though Bolivia as yet remains without the coveted free navigation via the Amazon.

Recently, with a view to influencing Bolivia to rescind the

Acre concession, Brazil is understood to have made proposals of exchange of other territory for the Acre, of free navigation, etc. Bolivia rejected all proposals, in the evident belief that a revocation of the grant to the Syndicate, for whatever reason, would weaken her hold upon the Acre district. But now that the Syndicate has allowed the concession to lapse, and has been dissolved, the Brazilian proposals may again come up for consideration, with the result of a new treaty being negotiated. Interest in the development of the Acre is not confined to the contending republics, and outside influences may yet be exerted to secure for that region a free outlet through Brazil. Here the government at Washington undoubtedly would be in a better position to act than hitherto, when any interference from that source might have been regarded as support of a private enterprise.

THE Bolivian Syndicate was formed to acquire, not only the Acre concession, held by Mr. Frederick W. Whitridge, of New

York, but also the Caupolican concession, granted to Sir Martin Conway, of London, and located in territory which is Bolivian beyond dispute. The Caupolican concession, before the Syndicate was dissolved, was transferred to The Bolivian Company, a West Virginia corporation formed in 1901, with an authorized capital of \$1,000,000, by practically the same financial group. The exploitation of the Caupolican district will proceed without reference to any Brazilian claim. The interest of the rubber trade in this undertaking is not so great, however, for while the district contains much rubber, the development of its mineral resources is the chief purpose of the *cessionnaires*. The head offices of The Bolivian Co. are at 59 Wall street, New York.



MAP OF THE BOLIVIAN CONCESSIONS.

The concession relinquished by the Bolivian Syndicate is that bounded by the dotted triangle. Brazil contends that the upper boundary line should run due west, instead of extending upward to the left. The Caupolican concession, in the lower part of the map, is retained by The Bolivian Co.

gueira, who was recently in New York on business connected with the projected loan for his state, contributed to the New York *Sun* of March 8 a version of the status of the Acre territory, from which the following statements are condensed:

In the territory known by the name of the Acre there is not a single aggregation of houses worthy of the name of a village. Its inhabitants, numbering about 3000, all of whom are Brazilians, are scattered here and there in the *seringaes*, leagues apart from each other. The former Bolivian custom house of Puerto Alonso was nothing more than a hut on the bank of the river Acre. There is not now and there never was on the Acre a single soldier of the Brazilian army, or of the forces of the state of Amazonas. The revolution was accomplished by peasants who were not willing to recognize the dominion, provisional at best, of Bolivia over a territory which they had exploited and always held as a portion of their Brazilian country. For more

than thirty years the Acre has been exploited and held by Brazilians who there established their homes as upon the soil of their own country. Even now, says Senhor Nogueira, in the repulse of the regular forces of the Bolivian army by the peasants of the Acre, it is patent that Bolivia has no rooted hold of the territory which it covets and which was exploited by the energy and daring of Brazilians decimated by swamp fevers and other hardships which there assume a terrifying aspect. Senhor Nogueira seeks to support his assertions as to the right of the Brazilians to this territory by quoting from the treaty of March 27, 1867, in which the northern boundary of Bolivia is declared to run westward from the mouth of the river Beni to the Javary, or, "if the sources of the Javary lie to the north of that east and west line," then "until it reaches the principal source of the said Javary."

But here the distinguished Brazilian gets upon troublesome ground and reopens the whole discussion over which the governments of Brazil and Bolivia are at loggerheads. Everybody knows the location of the mouth of the Beni river, so that there is no doubt about the starting point of the Bolivian frontier, but the treaty leaves a wide open question as to the other end of this boundary line, so that the Acre belongs to either Bolivia or Brazil, according as the treaty is interpreted by one power or the other.

* * *

THE *Brazilian Review* (Rio de Janeiro), though having an English editor, may be regarded as fairly reflecting conservative sentiment at the federal capital of Brazil in regard to the Acre question. From recent issues of the *Review* the following statement of its views is condensed:

"Whether done accidentally or out of sheer stupidity or diplomatic inability to state a plain case in a plain manner, boundary treaties are almost always drawn up in a way that will either admit of as many interpretations as there are litigants, or, as is the case with us, of no logical conclusion at all. From the wording of the treaty of 1867 the true boundary between Brazil and Bolivia might be either, or both, or neither, of two lines which the contesting parties are respectively contending for. The only way we can see out of the difficulty, if indeed there be any difficulty at all, is to toss up or refer the matter to arbitration.

"The cession of sovereign rights to a foreign syndicate and the failure of Bolivia to maintain order on our frontier are distinct and separate matters with which the course of the frontier has nothing to do, and can only be prejudiced by attempting to mix up one with the other. It is certain that we have the right to protest against the introduction of a new sovereign entity on our frontier, and equally so to insist on the maintenance of order and on fair and equitable treatment for citizens. That is enough. Let us stick to that and drop the frontier question altogether.

"Outside our cause for complaint with regard to the cession to the American syndicate, we have not the shadow of a grievance against Bolivia, and, if we attempt to assert the unjustifiable pretensions of filibustering adventurers from Amazonas and Pará, and attack Bolivia in their defense, will not only lose the sympathy and respect of other countries, but deserve it.

"No doubt the Acre is virtually Brazilian by right of settlement, and it would be a very good thing if it could be made politically a part of Brazil, by purchase or any other arrangement, also. But as far as absolute rights go we have none whatever, except to see that our people are not ill treated and that our interests are respected; the rest are all on the side of Bolivia, which has shown a remarkable degree of patience."

The *Brazilian Review* habitually speaks of 20,000 of "our kith and kin" in the Acre region, although Senhor Nogueira of Manáos, quoted on the preceding page, mentions 3000 as the total population of the district. It is asserted in New York by persons familiar with that region that the population is made up largely of adventurers and of derelicts—the latter being rubber workers who have been taken up the rivers and deserted by their employers at the end of the season without the means to return to their homes, thus becoming citizens of the Acre without any choice.

The population of Puerto Alonso in February, 1902, was reported at 345, including 202 white men and 5 white women. Of the total 271 were put down as of Bolivian origin (of whom 235 were soldiers) and only 38 Brazilians—and this is the most important settlement in the district.

On January 26 General Pando, president of Bolivia, left La Paz at the head of an armed force on a march for the Acre, and so far as is known he is still marching, although informed while on the second day out that Brazil would insist upon occupying the disputed territory pending arbitration. It is estimated that 126 days will be required for the army to reach the Acre, which will be about June 1. Meanwhile the Acre is probably being garrisoned by troops from Pará and Manáos, who lately started up the rivers. The Bolivian forces on the ground had already surrendered to Plácido de Castro, the insurgent leader.

NICOLAS SUAREZ IN THE ACRE WAR.

ONE of the items of "war news" that got abroad during the late unpleasantness in the Acre territory, related to an armed conflict between a body of revolutionists and a force of Bolivian rubber workers collected by Señor Nicolas Suarez on one of his *seringales* and captured by himself. The report was that the Suarez force gained a decisive victory, the effect of which, however, was nullified a few days later by the surrender of Colonel Rojas, in charge of the regular Bolivian forces on the Acre, to the revolutionist leader. Nicolas Suarez is one of the principal capitalists and largest rubber estate owners in the region of the upper Acre and Orton rivers, and is an important figure in Bolivia. When the revolution was declared last summer, citizenship in "the independent Acre republic" was offered to all residents in the district, Brazilians and Bolivians alike, with the exception of Suarez, to whom no quarter was to be given, he being declared a person dangerous to the interests of the new republic. One of the first moves of the revolutionists was to sack and destroy two of his rubber warehouses on the Acre river, but Suarez himself escaped to the Orton river, and it is probable that he raised his forces from his workmen on his rubber estates in the latter region.

THERE is no other place where the use of India-rubber is more essential than in a factory where high explosives are made. An account recently published of the great dynamite factory of the Hancock Chemical Co., at Dollar Bay, Michigan—the center of a mining district, which uses in a year 6,000,000 pounds of dynamite—contains numerous references to rubber. Every operative engaged in the factory work proper, must be rubber shod and wear rubber mittens, to lessen the liability of causing explosions either with their hands or their feet. Materials are conveyed about the works with wheelbarrows with rubber tires. Every precaution, in fact, is taken to prevent any of the explosive substances from coming under pressure of metallic bodies. Thus far no serious casualties have occurred.

THE INDIA-RUBBER TRADE IN GREAT BRITAIN.

By Our Regular Correspondent.

THE failure of this firm of raw rubber merchants has been a principal topic of conversation in the trade. Though naturally a somewhat risky business, no failure of the sort seems to have occurred before, at least not for a long time. A deficiency of £104,573 is a serious thing, and it is not surprising that detailed information as to the business procedure is being awaited with interest. The facts of the case as explained in the

KRAMRISCH'S
FAILURE.

papers so far are too lengthy and complicated to be dealt with in any short space, but I may say a word by way of comment on a certain feature. It is stated that the greatest sufferers are certain banking firms who have advanced money. In this respect there is a feeling in commercial circles that our banks by this money lending business, which has increased of late years, are acting somewhat against the interests of sound trade by enabling new firms with practically no capital to enter into competition with old-established firms working on a sounder financial system. Of course it is rarely that the banks get hit; they see too closely to their securities. Nor can it be argued that banks exist primarily for any other purpose than making money for their shareholders. Overdrafts generally are of course not to be condemned, as they are undoubtedly an assistance to trade; it is in the negotiation of doubtful paper that an unsatisfactory feature is introduced, because it gives a false idea of the strength of the firms from the quantity of their turnover. But not to pursue this topic further, it is certainly hard on Messrs. Kramrisch that they were involved in the troubles which have afflicted one or two rubber firms in the north of England in the last year or two.

UNDER the heading of "The danger of inferior hotwater bottles" the public have been made familiar with a case tried at the last Liverpool assizes. Briefly stated, a claim for damages to the person was brought by the purchaser of a rubber hotwater bottle against the chemist who sold it. The bottle burst when full of

INFERIOR
HOTWATER
BOTTLES.

hot water and scalded the patient. No doubt the jury were largely influenced by the analysis given in by Mr. Heyl-Dia, the expert for the plaintiff, which was as follows: 56.6 per cent. of mineral; 14.6 per cent. of oil substitutes, and 25.8 per cent. of rubber consisting almost entirely of reclaimed crumb rubber. Such a bag, the witness said, was quite unfit to hold hot water, and it would not have been manufactured by an English firm. This bottle, it appears, was made in America and sold by a Liverpool firm for 2 shillings 6 pence. An expert for the defense said he considered the material was all right and quite suitable for hotwater bottles, though cross examination elicited from him the opinion that it was inadvisable to use reclaimed rubber for hotwater bottles. The jury found that no assurance was given that the bottle would carry boiling water; that the bottle was not fit for use as a hotwater bottle when sold; and that this was the cause of the bottle bursting. They could not agree as to the question of negligence but assessed the damages at £140 against the chemist who retailed the bottle at 3 shillings 9 pence. The final judgment for the plaintiff was £40 for expenses, the £100 for compensation not being allowed by the judge. It seems to me that this case opens up a very wide question and one which cannot be adequately discussed in a few lines. It has long been apparent to me that the continual lowering of the quality of the rubber in surgical

goods is a dangerous thing. In the particular case under notice, America and not Great Britain has had to bear the brunt of exposure, but in many classes of surgical goods, British firms of late years have been compelled to lower their quality in order to compete with Continental competition, and it is quite common to hear doctors say that surgical rubber goods are not what they used to be. Of course if doctors were not so eager to buy at a low figure the old quality and prices would have been maintained, but all the same the buyer cannot be expected to discriminate between rubber and substitute where the outward appearance is the same. The Liverpool case makes it clear that to sell a faulty rubber article is a very risky procedure and it will probably lead to retailers requiring guarantees from agents and manufacturers. The latter will naturally decline to give a guarantee for inferior cheap articles and we shall probably find that the result is a return to the use of pure rubber, a consummation devoutly to be wished.

THE shareholders at the annual meeting of the Sanitas Co. of London were recently treated to a long discourse on the merits of the various golf balls now competing for public favor. It came as a surprise to outsiders that the enterprising founder and chairman of the Sanitas Co. had enlarged the scope of his company's operations by an entry into the golf ball manufacture, the connection between the two industries being to the ordinary mind somewhat remote. It has been deemed advisable to form a subsidiary company to work the golf ball business, and this is known as the Improved Golf Balls Co., Limited. Mr. Kingzett stated that in addition to the company's Gutta-percha balls, the "Flypool" and "Improved Remakes," he had patented the "Ortogo" ball, which was in competition with the American cored balls. He claimed that the Ortogo, which is rubbered but not rubber-cored, was superior to these, its exterior being perfectly impenetrable by the clubs; moreover the price was 1 shilling 6 pence, against 2 shillings. Possibly the makers of the American balls could reduce their prices in the face of competition, but this is a matter that need not detain me. Another new ball is the "Ortogo-Singer," the joint product of Mr. Kingzett and Mr. H. M. Singer, of St. Andrews. Finally, there was the "Skor," so constructed that whilst the whole of the case and exterior are made of gutta, there is an intervening cushion or buffer of specially prepared material of an elastic and resilient nature which prevents backing. All these balls, it appears, are patented, and the company will take steps against all infringers and imitators. It would not surprise me if this determination was put to the test before long, seeing the large number of claims made under the several patents connected with the Haskell and Kempshall balls, but I have no wish to advance matters in this direction.

THE retirement of Mr. George E. Heyl-Dia from the St. Helens Cable Co., of Warrington, came to the trade somewhat as a surprise. Originally with Messrs. Glover, at their old works in Salford, he, on leaving their employ, was the moving spirit in the formation of the Warrington works, and has acted as managing director. Mr. Heyl-Dia has shown strains of inventive genius, the insulating compounds "Diatrine" and "Dialine" owing their origin to him, while minor matters, such as gloves for electric wiremen, have engaged his attention. I understand that his present intention is to act as a consultant, though I do not think

DISINFECTANTS
AND GOLF BALLS.

ELECTRICAL
NOTES.

that any particularly brilliant future is before those who go to swell the number of consultants offering their services to a diffident public.

The Marconi business does not, of course (as some have supposed), threaten the existence of the rubber insulated cable maker, nor can it be said that the fibrous cable has ousted the rubber cable to any increased extent of late. The rubber cable in connection with lighting and traction still finds considerable application, especially in workshop lighting, switch board connections, and in fact in all cases where there is much jointing to be done, it being difficult to avoid the intrusion of damp in the case of the cellulose insulation. The use of electricity in collieries is increasing, not only for lighting the works, but also for pumping and for working electric coal cutting machines. Where several collieries belonging to one company are situated at some distance from one another, a good deal of cable is required to distribute the current from a single dynamo house. There can be no doubt that we are on the eve of a considerable increase of the applications of electricity to mining, and those electric firms who are first in the field should obtain some good contracts.

THIS reorganized company reports plenty of work in hand. They are making a special bid for the lawn tennis ball business, which is confined to very few works in Great Britain, the troublous times which the Eccles company have passed through of late having weakened their position as the principal opponents of Messrs. Charles Macintosh & Co. This branch has been subject to much severe cutting in prices that there has been little inducement to go in for it. It is to be hoped that realization in the case of the Hyde company will come up to anticipation.

I HAD an idea that Volenite had died a natural death, from the cold way in which its vaunted pretensions to rank as a rubber substitute had been met by the public. It seems, however, that I was somewhat previous in my conclusions. The chairman of the Fish Oil and Guano Co., at the recent meeting, announced that they were, he believed, nearer a development of a most gigantic character in favor of Volenite than they had ever been. He further remarked on another point that they would know on March 31 what the rubber men of New York had to say with regard to the Rhea company. With regard to Volenite, the optimistic language used is delightfully vague; it is possible to be nearer a success than before but still to be a very great distance from it. One calls to mind in this connection the asymptote curve known to students of conic sections, and which though continually getting nearer to the fixed point does not meet it until infinity.

IN a communication to a contemporary Dr. Weber has recently made a pronouncement on the use of the vacuum process which should be noted, because he has apparently, after longer experience, had reason to change his former opinions. At the meeting of the Manchester section of the Society of Chemical Industry, in March, 1900, he spoke very favorably of the use of the vacuum chamber, because of the decreased liability there was of the oxidation of the rubber. He stated that he had found in a washed sheet of Pará rubber, dried in the ordinary hot-air stove 59 per cent. of oxygen, while part of the same sheet dried in a vacuum pan showed only 1.7 per cent. of oxygen. Now, however, for various technical reasons which I cannot enter into here, but which I fully endorse, he has expressed himself against the vacuum process, the advantages of which have not proved to counterbalance its disadvantages. This will come as cause for congratulation to those firms who from

the beginning were dubious as to the advantage of the extra capital outlay involved.

THIS is the new title of the London Rubber Manufacturing Co., which was established about three years ago by Dr. Schumacher at Croft street, Deptford, London. Dr. Schumacher, I may remark, was formerly assistant chemist at the Harberg-Vienna Rubber Works, at Harburg, from whence he went for a year or two to Messrs. Charles Macintosh & Co., Manchester. His associates in his present enterprise are, to judge by their names, all of his own nationality, and vulcanite goods form a prominent part of the output of the firm.

THIS appendage to the spreading machine has been referred to before in these columns, and to judge by some correspondence I have seen it seems to be attracting interest over the water; the fact that one of our principal factories has fitted ten spreading machines with certainty tends to show that the advantages claimed for it are not the outcome of mental illusion in the case of the patentee.

UNDER this title a paper by Messrs. H. Grimshaw, W. Tong, and R. Barnes was read at the March meeting of the Manchester section of the Society of Chemical Industry. Mr. Grimshaw, who read the paper, gave an illustration of an analysis of a sample of compound rubber as performed in the old days before the present analytical methods had been published, and in which the various organic matters were lumped together, scrupulous care being taken in the determination of small quantities of inorganic matters of no importance and only present as impurities in the filling materials. The rest of the paper consisted of a statement of the methods of analysis already worked out by Henriques, Weber, and others, the solvents recommended being acetone and nitrobenzene. He gave several analyses of reclaimed rubber made by his procedure stating incidentally that as a rule the American products contained more mineral matter than did the English. In the determination of bituminous matter he said that errors might creep in owing to the tendency of vulcanization or overheating to produce bituminous matters from the rubber itself. In the discussion Mr. Terry rather criticized the paper on the score of want of novelty. He held no brief, he said, for Dr. Weber, but still he thought that his publications on rubber analysis should have had more pointed reference by the authors than had been the case that evening.

I AM informed with regard to the naphtha recovering machine recently referred to in these notes, as the joint patent of C. O. Weber and Messrs. Isidor Frankenburg, Limited, that the patent is now the sole property of Messrs. Frankenburg.

THE United Rubber Co. is the name of a new concern in which Mr. Thomas Rowley is interested. The works are at Clayton, Manchester, and it is the intention to manufacture certain classes of mechanicals and solid cab tires. Mr. Higham, late works manager at the St. Helen's Cable Co., is connected with the venture.

THE Fiji Islands have lately come to be something more than a dot placed at random on the map of the Pacific ocean. They are reached by a link in the British-Pacific cable; statistics of imports and exports are kept—aggregating about \$4,500,000 last year; and regulations exist there by which foreign trade marks and patents may be registered. In one year recently the imports of India-rubber goods were valued at £305, and presumably the amount will be shown by more recent reports to have increased.

THE INDIA-RUBBER
MANUFACTURING
CO., LIMITED.

COULTER'S
REVOLVING
SPREADING
MACHINE
GAGE.

ANALYSIS OF
INDIA-RUBBER.

NAPHTHA
RECOVERY.

NEW WORKS.

HYDE RUBBER CO.,
LIMITED.

VOLENITE.

DRYING OF
WASHED RUBBER.

RUBBER PLANTING AND EXPLOITATION.

RESULTS OF RUBBER TAPPING AT SAN MIGUEL.

AN exact record was kept of the results of some recent tapping of rubber trees (*Castilloa elastica*) on the "San Miguel" plantation, owned by the Tabasco Plantation Co. (Minneapolis, Minnesota), located on the Macuspana river, in the state of Tabasco, Mexico, which are summarized below. There are on this estate about 400 large rubber trees, which were planted in the shade of cacao and coffee. These trees were not only grown in cacao and coffee, but under the shade of "mother" trees (not rubber) planted for shading the coffee while the rubber was getting a start. The secretary of the company, Mr. James C. Fifield, in communicating these results to THE INDIA RUBBER WORLD, writes: "A fact well known to the rubber planters is that trees planted in the shade require a much longer time to attain their maturity and full size than those planted in the sun. In fact, the most casual observer could not fail to notice the astonishing difference in size between the trees grown in the sun and those in the shade. It is believed that the size of a rubber tree has more to do with the amount of rubber which it will produce than its age." In the table which follows is given the age of the trees, except that the age of those placed at 10 and 12 years is not accurately known; the circumference of the trees three feet from the ground; the weight in ounces of the latex secured; and the average yield per tree of dry rubber (including a small amount of scrap pulled from the trunk of the tree after tapping). The details follow:

AGE.	No. of Trees.	Average Girth.	Ounces Latex.	Ounces Rubber.
7 years.....	257	33.80"	11.80	9 30
8 years.....	14	37.75"	20 70	14.25
9 years.....	7	40.14"	21.28	18
10 years.....	4	43.25"	26.75	17.50
12 years.....	21	50.50"	40.50	28 90

Based upon the above figures, the rubber product from an acre of land containing 200 trees seven years old would be 112 pounds; at eight years old, 174 pounds; at nine years old, 240 pounds; and at twelve years old, 314 pounds.

The following account of the rubber tapping at San Miguel was prepared by Mr. Boyer, the plantation manager:

"We were very fortunate in securing for the plantation a native rubber tapper who has been raised in the rubber district, and for many years has successfully tapped both wild and cultivated rubber trees in the states of Chiapas and Tabasco. With this experience he was able to obtain the best results without injury to the trees.

"The first step in tapping a rubber tree is to clean a small place around the tree, a small gash then being made in the bark with the point of a *machete* and a leaf inserted therein, which serves as a spout to run the milk into pails. This leaf is placed about fifteen inches from the ground. From this point the cuts are made upwards at an angle of 45 degrees and extending in each direction a sufficient distance to include three-fourths of the circumference of the tree. Directly above this, a distance of one meter, another cut is made exactly like the first, the milk flowing down the side of the tree into the first cut and on into the pail. These cuts are repeated on the entire body of the tree, or until the branches are encountered. You will at once see that all the milk has not been secured, but a sufficient amount left to maintain the tree in good condition for another

year. The next tapping, which will be made in a year from now, will be made on the same side of the tree, three inches above the cut made this year, and the following year three inches above that, so that it will be possible to make thirteen tappings on one side, or twenty-six on both sides; or in other words, a tree can be tapped twenty-six years without retapping the old cuts. The instrument used by the natives is a *machete*, or long knife. The bark of a ten year old rubber tree is about three-fourths of an inch thick.

"The rubber trees on San Miguel are of the variety known throughout Mexico and Central America as *Castilloa elastica*. This variety is divided into two classes, the first of which is known as the yellow rubber tree, or 'hule amarillo,' this being the male. The milk from these trees flows very freely, having a rich yellowish color. It flows so freely that there is scarcely any left in the cuts after tapping. The other variety is known as the white rubber tree or 'hule blanco,' this being the female. The cuts made in these trees are not made at a 45 degree angle, but horizontally, a sufficient distance to include three-fourths of the circumference of the tree. The milk from this tree oozes into and fills the cuts, flowing down the tree several inches. The milk is very thick, requiring several days for it to dry so that it can be gathered. Of the two varieties the yellow is regarded as superior.

"The milk, gathered in pails, is taken to the rubber drying house, where it may be converted into rubber through either of the following processes, both of which we have used: First, it is spread on a cement floor to a depth of three-fourths of an inch, this floor being so situated that the milk is constantly in contact with the sun's rays, thus drying very rapidly. After it is dry the sheets are rolled up into convenient sizes for shipment. The second process is through coagulation with a native vine known as 'bejuco de necta.' During the coagulation the rubber is left porous, and as it contains more or less water it is necessary to remove the same by using a press. It requires more time to prepare rubber by the first process. The average shrinkage in converting milk into solid rubber is 2.3, or in other words, 2.3 pounds of rubber milk will produce one pound of rubber. I have personally attended to the tapping and the figures herein given are absolutely correct."

LA ZACUALPA RUBBER PLANTATION CO.

[Plantation near Tapachula, state of Chiapas, Mexico. Offices: San Francisco, California.]

A NEAT brochure published by this company reproduces letters from twenty-five of their shareholders, expressing satisfaction with the management of the company. The writers of the letters are stated to hold 503 shares, representing an investment of \$62,875.—The price of La Zacualpa shares was advanced on March 1 from \$125 to \$150.

YAVEO PLANTATION CO.

[Plantation near San Juan Evangelista, state of Oaxaca, Mexico. Office: St. Joseph, Missouri.]

INCORPORATED in October, 1902, under the laws of South Dakota, to cultivate rubber in Mexico; capital, \$250,000. Property, 1000 acres on the Colorado river, adjoining the Pan-American Planters' Co. (Chicago) tract and the private plantation of Maxwell Riddle; near the Vera Cruz and Pacific and National Tehuantepec railways. Stock is offered in \$250 shares—one for each acre to be developed—payable in installments. It is planned at present to plant rubber alone, and dividends from other sources are not promised. W. True Davis, president;

C. J. Tygart, M. D., vice president; E. P. Grant, secretary; J. J. Swain, treasurer; A. C. Owens, general manager—all reputable citizens of St. Joseph, Missouri. James Brydon is plantation manager, in addition to holding the same position with the Pan-American Planters' Co.

THE SAN MIGUEL PLANTATION CO.

[Hacienda "San Miguel," state of Vera Cruz, Mexico. Office: Chamber of Commerce, Chicago, Illinois.]

INCORPORATED under Illinois laws, to cultivate rubber, sugar cane, and tropical fruits; capital stock, \$200,000; have purchased 2085 acres, 23 miles from Coatzacoalcas, on the navigable Chalapa river, and near the National Tehuantepec railroad; have "under cultivation" and "in the nursery ready to transplant" over 200,000 rubber trees, but number actually planted is not given; have sugar cane and pineapples growing. Offer development bonds at \$300 each, in monthly installments for five years, at the end of which time the promised dividends will have amounted to \$382—all before the rubber trees are productive. With the rubber yielding, annual dividends of from 100 to 125 per cent. are promised. The Equitable Trust Co. (Chicago) trustee; Richard Walsh, president; Tullon Embry, vice president; H. E. Rose, secretary and treasurer. W. A. Kemp is plantation manager.

THE MERIDEN RUBBER PLANTING CORPORATION.

[Plantation "El Meriden," Tula, state of Vera Cruz, Mexico. Office: Meriden, Connecticut.]

J. HERBERT FOSTER, manager, reports taking up the option held on the second half of the adjoining Buffum tract, the first half of which was purchased a year ago. The money was provided by an additional issue of stock, taken by the original shareholders. The trees under Mr. Foster's care are five years old.

"CEARA RUBBER" IN EAST AFRICA.

THE last INDIA RUBBER WORLD contained a reference to the interest in rubber of the Deutsch Ostafrikanische Plantagen-Gesellschaft, on their plantation at Lewa, in German East Africa. A letter from Berlin offices of that company informs us that the species planted is *Manihot Glaziovii*—the rubber of Ceará—of which they now have 250,000 trees standing. Recently 4000 five year old trees were tapped, yielding about $\frac{1}{4}$ pound of latex each, of which they estimated that 30 per cent. in weight was lost in drying. This would give a yield of 700 pounds of dry rubber for the 4000 trees, which, considering the age of the trees, and the good quality of the product, is considered very encouraging.

BOLIVIAN RUBBER CO. OF BALTIMORE (MARYLAND).

THIS company was incorporated February 3, 1903, under the laws of Delaware, to acquire and develop certain rubber concessions in Bolivia; capital, \$2,500,000. The directors for the first year are: Israel M. Parr, Jr. (president); Thomas F. McGlone (vice president); G. Howell Parr (secretary and treasurer); Henry A. Parr, George R. Webb, Nicholas P. Bond, and Andrew Gray. The company succeeds The Andes Rubber Co. [see THE INDIA RUBBER WORLD, May 1, 1902—page 255], formed nearly two years ago by the same Baltimore business interests, to obtain options on certain rubber properties pending a full investigation of the same. These properties have now been acquired, and the new company is organized to continue, on a larger scale, the work of development begun by the original concessionaires.

The property of the Bolivian Rubber Co. is located in north-western Bolivia, in the province of Caupolicán, department of La Paz, about 55 miles from the town of Apolo (15° south latitude), and 580 miles from the port of Mollendo, of which 349 miles are covered by rail. Apolo is located west of the river

Beni. The tract embraces 40 square leagues (Bolivian), equal roughly to 100 square miles. It is bounded on three sides by rivers, the Beni forming the southern boundary. Work was begun about three years ago, by previous owners of the land, at four different points, about 2000 estradas (rubber paths) being opened; small farms developed, and Indians induced to settle on them; and other arrangements made, looking to the organization of an established working force for gathering rubber. In the 1901 season 82,000 pounds of rubber were collected, and sold at Mollendo. In 1902 rubber gathering was resumed, and 110,000 pounds were shipped to New York. The work of gathering rubber has since been continued, and several lots from this estate have arrived lately at New York.

The head offices of the company are at No. 44 South street, Baltimore, Maryland, and they are represented in New York by H. D. Selleck, No. 68 Broad street. J. A. Pharoah, the company's manager in Bolivia, was in the United States recently starting from New York on March 31 to return to his work. The capital employed in this enterprise thus far has been supplied mainly by Henry A. Parr, of Baltimore, but it is now proposed to admit other investors.

RUBBER AND CHICLE IN YUCATAN.

THE Mexican department of public works has granted a concession to Rodolfo Reyes, authorizing him to cut dyewoods, mahogany, and other timbers, and gather India-rubber and Chicle from the forests comprised in 161,224 hectares [=398,834½ acres] of public lands in the district of Peto, state of Yucatan. The duration of the contract is ten years, during which time the concessionaire binds himself to exploit the whole concession, the extent of each year's work being defined. He is to pay for the privilege \$18, Mexican, for each ton of Chicle, \$24 for each ton of India-rubber, and stipulated prices per timber tree of the various species.

TO EXPLOIT FOREST RUBBER IN MEXICO.

THE Mexican Mutual Mahogany and Rubber Co., incorporated under Ohio laws with \$2,500,000 capital, do not propose to do any planting. They have secured a forest tract in the department of Chilon, state of Chiapas, reported to contain 879,702½ acres, with a view to cutting mahogany, dyewoods and cedar, and gathering rubber. The company estimate 4,000,000 wild rubber trees on their land, worth \$10 each, and from which they promise an annual income (presumably net) of \$100,000, besides the profits from lumber. It is not stated that these figures have been supplied by a graduate from any reputable guessing school, and they should be received with caution. It would, indeed, be surprising to find 4,000,000 wild rubber trees in all Mexico. Ira Z. Mason is president, L. S. Page, secretary, George A. De Witt, treasurer—all of Toledo, Ohio—and A. B. Adams, of New York, vice president.

MEXICAN PLANTING NOTES.

LA Zacualpa Rubber Plantation Co. (San Francisco) have advanced the price of their shares from \$125 to \$150. During the past season they have done much improvement work on their estate in Chiapas, and are prepared to do an important amount of new planting this year.

=Harry L. Trott has become connected with the Mexican Plantation Co. of Wisconsin, on their Plantation "La Crosse," in Oaxaca. After a four years' course in the agricultural department of the University of Wisconsin, Mr. Trott has had three years experience in tropical planting.

=The Pan-American Planters' Co. (Chicago) are clearing 250 acres this spring on their "San Isabel" plantation, in Oaxaca. The first issue of 1000 plantation certificates—two per acre—has nearly all been sold.

INDIA-RUBBER INTERESTS IN EUROPE.

HIGHER PRICES FOR RUBBER GOODS IN GERMANY.

AT the suggestion of the Centralvereins Deutscher Kautschukwaaren-Fabriken a meeting was held on February 28 at the Hotel Kaiserhof in Berlin to consider the question of advancing the prices of India rubber goods. That the effect of any such meeting might be general, some leading manufacturers who are not members of the union were invited and attended, twenty three factories in all being represented. The sentiment of the meeting was that, in view of the high prices of crude rubber, textile goods, and the other materials entering into their industry, an advance of 10 per cent. on the prices of rubber goods was desirable, but final action was deferred to a further meeting announced for March 24, which, it was expected, would be more largely attended. The object and purpose of these meetings is commended by the *Gummi-Zeitung* (Dresden), which remarks, editorially:

"The situation in the raw rubber market is developing uninterruptedly on the lines predicted by us in November of last year. Prices have permanently maintained their high level—minor reductions taking place only in extreme cases, when the demand declines temporarily. Immediately upon a return of liberal buying, however, prices again advance. The good middle sorts, however, which are always in good demand, are advancing slowly, but steadily. Prospects of a material change of this condition do not exist; on the contrary, a further advance is to be feared. Certainly a lasting decline in raw material is not in sight. The tension thus created in the rubber industry has reached the breaking point, and manufacturers in every branch of the industry have begun to realize the urgent necessity for advancing the prices of their products. A few of them already have taken the initiative in this direction and informed their patrons of a necessary advance in prices."

THE London *India-Rubber Journal* (March 2) denies the reports of concerted price advances by English rubber goods manufacturers, lately current in Germany, except on rubber thread.

THE NAME "REITHOFFER" IN AUSTRIA.

WHEN, in June, 1872, the business was organized which since has been known as the Vereinigte Gummiwaaren-Fabriken, Harburg-Wien, the factory was acquired of the old firm J. N. Reithoffer, at Wimpassing (Austria), with depôts at Vienna, and all the patents, clientele, and rights of that firm. As successors to this business, the Harburg firm have since added to their name "vormals J. N. Reithoffer." In 1863 the firm Josef Reithoffer's Söhne was registered in Vienna, selecting a location in the same Mariahilferstrasse where J. N. Reithoffer's store had existed for thirty years, and engaged in the same branch of trade. During the "eighties" two former employes of the Harburg-Vienna firm established themselves next door—Herrengasse, 4—to the retail store of that firm, their sign indicating: "Depot of rubber goods from the factory of Josef Reithoffer's Söhne." All of which led the Harburg-Vienna company to give special emphasis to that part of their firm name, "vormals J. N. Reithoffer," on their signs in Vienna and their price lists intended for the trade in that city. The firm Josef Reithoffer's Söhne, feeling themselves injured by this, brought suit to restrain the Harburg-Vienna company from such prominent use of the name "Reithoffer," the result of which has been a decision in favor of the de-

fendants, who have established their claim to be sole successors of J. N. Reithoffer and their right to use his name as prominently as they may see fit. The Harburg-Vienna company, therefore, have issued a circular reiterating their direct and sole succession of Johann Nepomuk Reithoffer, who was the founder of the India-rubber industry in Austria, and that no other firm by the name Reithoffer has any connection with the same.

IMPRISONED FOR STEALING RUBBER.

SEVERAL persons have been sentenced to imprisonment in connection with the thefts of crude rubber which occurred throughout the years 1899-1902, from the Kölnische Gummi-fäden-Fabrik (Cologne Deutz, Germany). So extensive were these thefts that a single rubber factory had rubber delivered to it, which afterward was found to have been stolen, to the value of \$16,452. At the hearing in the criminal court, the director of the rubber thread factory which had sustained the loss, Herr Gustav Walter, stated that large quantities of rubber were used—5000 to 10,000 kilograms [=11,023 to 22,046 pounds] every two weeks. Suspicion of theft was first caused by a great increase in the shrinkage of rubber in washing. Members of the family of the superintendent of the rubber thread factory were implicated, though no proof was offered that the superintendent himself had knowledge of the thefts. Outsiders were engaged as go-betweens, and the stolen rubber was offered to factories as having been received from Holland. Three persons were sentenced for stealing for an aggregate of 3 years and 8 months, and four persons for concealing stolen goods for an aggregate of 5 years and 4 months.

LARGE WORK IN CABLE CONSTRUCTION.

AT the annual meeting of the Telegraph Construction and Maintenance Co., Limited (London, March 3), it was stated that during three years submarine cables made by the company had been laid around the world, involving 29,000 miles of cable. They had carried out minor contracts, which brought up the total output to 37,000 miles laid during the three years. This was equal to an average of 40 miles per day, and at times of pressure the speed of making exceeded 60 miles per day. The profit for last year, after deducting interest charges, had been £99,000. The dividends had been the same as last year—4½ per cent. on the preference and 20 per cent. on the ordinary shares. The amount carried forward is £101,380. Important extensions of the company's facilities are contemplated. The pension fund, for the benefit of employes, now reaches £63,890.

THE DUNLOP COMPANY AND MOTOR TIRES.

THE Dunlop Pneumatic Tyre Co., Limited, have issued a circular explaining their position with regard to motor tires, in answer to an impression which has prevailed in some quarters that the company were antagonistic to the automobile movement. Before the introduction of automobiles the Dunlop company were bound by certain agreements relating to the Bartlett "Clincher" tire patent, purchased from the North British Rubber Co., Limited, not to issue more than one license for the manufacture of this tire in addition to the one issued to the North British company themselves. In time one such license was granted to the Clipper Pneumatic Tyre Co., Limited, since when the Dunlop company have had no power to license the importation or use in Great Britain of foreign tires infringing the Bartlett patent, in consequence of which automobilists were

deprived of the use of foreign cars fitted with foreign tires while the British automobile industry was still in the embryonic stage. The Dunlop company, therefore, gave permission to its licensees, the Clipper company, to have their motor tires manufactured by them by the best known foreign makers, whose tires were thus placed at the disposal of the British public. Dissatisfaction continuing to exist, the Dunlop company states that it approached the North British company to get them to relax the terms of the agreement in view of the situation which had not been contemplated when the agreement was entered into. The North British company, however, not only refused this, but further stated that had they known that it would be competent for any of the Dunlop licensees to have their tires made abroad and imported into Great Britain, they would never have consented thereto, and further the North British company sought to have the Clipper company restrained from importing and selling foreign made tires. The company feels, says the circular, "that in common justice the above facts should be made known so that it may no longer suffer the odium attaching to a situation for which it is not responsible and which it has taken every possible step to modify."

A SECOND RUBBER JOURNAL IN FRENCH.

A SECOND journal published in French in the India-rubber interest has come into existence—the *Industrie et Commerce du Caoutchouc et de la Gutta-percha*—an illustrated monthly published by E. Dutemple and edited by Charles Dufour, at Avenue de la Reine, 11, Brussels, and Rue Lafayette, 208, Paris. The *Gummi-Zeitung* (Dresden) remarks that in recognition of the need for a trade journal in the Caoutchouc interest for circulation in French speaking countries, it considered the idea as long ago as nine years of publishing an independent French edition in Paris. It adds: "Whether the necessity is so great, however, as to enable two publications simultaneously [another new French rubber journal was mentioned in THE INDIA RUBBER WORLD last month] to find food for a healthy development from the start is doubtful, in our opinion." It wishes success to both the new comers, however.

KEMPSHALL GOLF BALLS IN GREAT BRITAIN.

THE sole manufacture and sale of the Kempshall golf balls in Great Britain has been taken over by The St. Mungo Manufacturing Co., of Broomloan road, Govan, Glasgow, with London offices at 37, Walbrook, E. C. The St. Mungo company have been making Gutta-percha balls for some years, but now announce in a circular to the trade that "the general use of rubber cored balls is an assured fact." The Haskell Golf Ball Co. (Akron, Ohio) are prosecuting suits for infringement against the Kempshall interest in Great Britain as well as in the United States.

GREAT BRITAIN.

THE Liverpool Rubber Co., Limited, have paid on last year's business dividends of 5 per cent. on their preference shares and 2½ per cent. on the ordinary.

=Mr. Archer Phillip Crouch has been appointed secretary of the India Rubber, Gutta Percha, and Telegraph Works Co., Limited (London) to succeed the late Mr. T. J. Lloyd, who had filled the office for many years.

=The India Rubber Manufacturing Co., Limited, was registered on February 27, with £20,000 capital, to carry on the business conducted hitherto as the London Rubber Manufacturing Co., at 88, Croft street, Deptford, London.

=W. T. Henley's Telegraph Works Co., Limited, show a net profit for 1902 of £61,362 9s. 8d. Dividends, at the rate of 4½ per cent. on preference and 20 per cent. on ordinary shares, amounted to £54,375. The amount carried forward is £25,967

13s. 11d. The year's business was mainly in India-rubber goods, the company not having had much to do in connection with submarine cable work. Owing to the need of increased plant, the company probably will issue this year the shares which have been held in reserve—£25,000 preferred and £25,000 ordinary.

=A company has been formed under the name of The de Nevers Rubber Tyre Co., for the business carried on for twenty years by Oscar Count de Nevers as the New York Wheel and Rubber Co., 377, Kennington road, London, E. C. Their tire factory is at Bendon Valley, Earlsfield, London, S. W.

GERMANY.

THE Deutsch-Atlantische Telegraphen-Gesellschaft have finished laying their second line of cable to New York as far as the Azores—1851 miles. The remainder of the cable, now being manufactured at Nordenham, will not be completed for several months.

=Loewitz & Rohlf, of the Gutta-percha and Balata works at Altona-Ottensen, announce in a circular a reduction in their discounts to 10 per cent., which will only in part compensate for the increase in the cost of raw materials since their former discounts were fixed.

=The firm of Feist Strauss (Frankfort o/Main), dealers in waste rubber and supplies for the caoutchouc, linoleum, and celluloid industries, have established a branch in Berlin—Lange-strasse, 97—where Herr S. Rosenbaum will superintend the purchases and sales for that city and its vicinity.

=The dividend of the Vereinigte Berlin-Frankfurter Gummiwaaren Fabriken (Berlin) for the business year just closed is 9 per cent., against a dividend of 7 per cent. declared in the year previous.

=The French firm of Michelin & Co. have removed their German branch from Mannheim to Frankfort o/Main—Kronprinzenstrasse, 37. The business of this house is confined largely to the sale of the Michelin pneumatic tires.

=Actiengesellschaft für Fabrikation Technischer Gummiwaaren, C. Schwanitz & Co. (Berlin), has declared a dividend of 8 per cent. for 1902, against 9 per cent. in 1901, and 8 per cent. previously.

FRANCE.

THE Société Française des Pneumatiques Dunlop, Limited, have established a factory at Argenteuil, near Paris, and are now making tires. The dividends from last year's trading were 6 per cent. on the preference and 10 per cent. on the ordinary shares.

BELGIUM.

THE new *Moniteur du Caoutchouc* (Brussels) states that the factory of the Centrale Belge, at Alost, a branch of La Centrale Africaine Société Anonyme, has established an equipment for the manufacture of rubber shoes.

MOSELEY-PREECE.

MR. DAVID MOSELEY, chairman of David Moseley & Sons, Limited, India-rubber manufacturers of Manchester, was married on February 11 to Agnes Gwen, eldest daughter of Sir William Henry Preece, K. C. B., F. R. S., consulting engineer to the British postoffice and consulting engineer to the British and Colonial governments. The remarkable gifts of Sir William Preece as a lecturer on science have brought him prominently before the general public; he is the patentee of no less than nine inventions of value in connection with telegraphy, and the author of a large number of books and papers in the field of electrical science. Mr. Oswald Moseley, second brother of the bridegroom, officiated as best man. The wedding tour was made in Italy.



THE ONLY RUBBER BOOK.

THERE have been, first and last, a great many books printed about India-rubber, but as far as we know only one on India-rubber, and that was Charles Goodyear's work on "Gum Elastic," one copy of which was printed upon leaves of a sort of parchment made of India-rubber mixed with fiber, the covers being plates of hard rubber, beautifully carved. In writing of Goodyear's book in the *North American Review* (July, 1865) James Parton said:

The work presents at least something unique in the art of book making. It is self illustrating; inasmuch as, treating of India rubber, it is made of India rubber. An unobservant reader, however, would not suspect the fact before reading the preface, for the India-rubber covers resemble highly polished ebony, and the leaves have the appearance of ancient paper worn soft, thin, and dingy by numerous perusals. The volume contains 620 pages; but it is not as thick as copies of the same work printed on paper, though it is a little heavier. It is evident that the substance of which this book is composed cannot be India-rubber in its natural state. Those leaves, thinner than paper, can be stretched only by a strong pull, and resume their shape perfectly when they are let go. . . . The book itself tells us that it can be subjected, without injury, to tests more severe than summer's sun and winter's cold. It can be soaked six months in a pail of water, and still be as good a book as ever. It can be boiled; it can be baked in an oven hot enough to cook a turkey; it can be soaked in brine, lye, camphene, turpentine, or oil; it can be dipped into oil of vitriol, and still no harm done. To crown its merits, no rat, mouse, worm, or moth has ever shown the slightest inclination to make acquaintance with it.

It is quite possible that the distinguished reviewer here quoted did not expect to be taken seriously, but as a matter of fact, and quite unfortunately, this priceless volume has been injured both by fire and flood. Its repository was a safe in the New York office of a prominent member of the Goodyear family. This safe passed through a serious conflagration, and, before it was rescued, lay for some time in a cellar, flooded with water. The result was that many of the leaves were fused together by the heat, and stained by the infiltration of water, and that the cover, instead of being a jet black, is now a chocolate brown. Whether the book can be completely restored is a question, and before it is attempted, the advice of experts in the trade will be taken that the remedies applied may in no way deface it. The accompanying illustrations show the volume as it now appears.

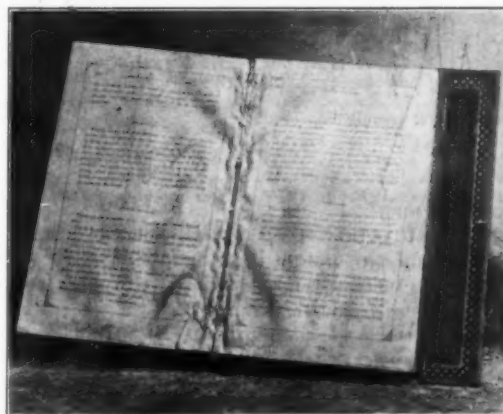
GERMAN ELECTRICAL CONSOLIDATION.

THE consolidation of electrical interests in Germany, referred to in the last INDIA RUBBER WORLD, still continues. At meetings held on February 17 of the shareholders of the respective companies, a plan was ratified for the merger of two important enterprises at Frankfort o/Main. The Gesellschaft für Elektrische-Unternehmungen [Company for electrical undertakings], operating various central stations, tramways, etc., is thus absorbed by the Electricitäts-Aktiengesellschaft vormals W. Lahmeyer & Co., an electrical manufacturing concern. Two new shares of the latter company's stock are issued for three shares of the company taken over, which ceases to exist as a separate concern. This company, by the way, though able to earn a dividend of 7 per cent. in 1898-99, showed a deficit last year of over 720,000 marks, but the undertakings under its control are said to give promise of good development. By the way, the failure of so many new public utilities in Germany to yield profits as soon as was expected is responsible in large part for the recent commercial and industrial depression there.

The manufacturing companies, however, continue to promote new undertakings, at home and abroad, as a means to securing new orders for their products. For example, the two great electrical combinations mentioned in the last INDIA RUBBER WORLD are now credited with negotiations for raising a capital of 10,000,000 marks for the conversion of the horse tramways at Valparaiso (Chile) to electric traction. As for the merger at Frankfort o/M., mentioned above, it was financed by the Bank für Handel und Industrie in Darmstadt—with 132,000,000 marks capital—one of the group of banks in close relation with the Allgemeine Electricitäts-Gesellschaft, so that a connection between the Lahmeyer concern and that company may be inferred. The consolidation above referred to was thoroughly considered early in 1902, when it was all but consummated, the only obstacle being the heavy bond issue of the company to be absorbed—10,000,000 marks, due in 1939—which now has been satisfactorily provided for.



THE BOOK OPENED AT THE TITLE PAGE.



THE BOOK OPENED AT THE MIDDLE.

INDIA-RUBBER GOODS IN COMMERCE.

EXPORTS FROM THE UNITED STATES.

OFFICIAL statement of values for January, 1903, and the first seven months of four fiscal years, beginning July 1:

MONTHS.	Belting, Packing, and Hose.	Boots and Shoes.	All other Rubber.	TOTAL.
January, 1903.....	\$ 55,034	\$ 81,802	\$ 175,893	\$ 312,729
July-December.....	412,122	793,028	1,053,612	2,258,662
Total.....	\$467,156	\$874,830	\$1,229,405	\$2,571,591
Total, 1901-02.....	355,509	833,034	940,363	2,129,806
Total, 1900-01.....	304,762	587,687	963,740	1,856,189
Total, 1899-00.....	319,206	251,861	748,242	1,319,309

RUBBER GOODS EXPORTS FROM NEW YORK.

VALUES during four weeks ended February 24, 1903:

Argentina... \$ 762	Denmark... \$ 70	Norway... \$ 566
Australia... 6,078	Dutch Guiana 16	Nova Scotia... 37
Aus Hung'y 700	Dutch W. Ind. 15	Peru... 375
Belgium... 4,394	Ecuador... 576	Philippines... 2,284
Brazil... 1,751	France... 9,711	San Domingo 137
Brit. Africa... 10,006	Germany... 14,765	Spain... 646
Brit. E. Ind. 1,383	Great Britain 51,149	Sweden... 726
Brit. Guiana 287	Haiti... 46	Turkey... 156
Brit. W. Ind. 719	Italy... 1,755	Turkey (Asia) 57
Central Amer 759	Japan... 1,554	Uruguay... 86
Chile... 1,232	Mexico... 6,655	Venezuela... 114
China... 40	Netherlands. 13,991	
Colombia... 4:1	Newfoundld. 519	Total... \$144,992
Cuba... 6,334	New Zealand 4,127	

COMPARATIVE STATEMENT BY COUNTRIES.

VALUES of imports and exports of manufactures of Caoutchouc and Gutta-percha, officially reported, for 1902, stated in United States money, at par of exchange:

	Imports.	Exports.
Germany.....	\$3,017,602	\$1,132,708
a United Kingdom.....	[3,034,910]	5,910,647
United States ..	679,465	3,815,754
France (special commerce).....	3,194,536	1,896,418
Austria-Hungary..	2,275,715	1,849,245
b Russia.....	451,731	1,435,431
c Italy.....	808,130	606,817
d Canada.....	775,029	322,572
Total.....	\$14,237,418	\$26,969,592

[a—Not officially stated as yet; imports estimated on basis of five years preceding. b—Estimated on basis of preceding returns. c—Figures for December estimated. d—For fiscal year 1901-02.]

The combined excess of exports for the countries named was \$12,732,000, which represents approximately the value of the market for rubber goods outside of these leading manufacturing countries.

RUBBER FOOTWEAR MOVEMENT FOR 1902.

[Official Returns, Included in the Totals in the Preceding Table.]

	Imports.	Exports.
Germany.....	\$ 1,047,676	\$ 452,438
a United Kingdom.....	[1,198,234]	835,458
United States ..	None.	1,065,592
France (special commerce).....	515,889	181,613
Austria-Hungary.....	288,047	464,383
b Canada.....	150,775	Not stated.
c Russia.....	None.	1,354,336

[a—Imports stated are for 1901. b—Fiscal year 1901-02. c—Estimated on basis of preceding returns.]

MORE PROTECTION FOR AUSTRIAN RUBBER SHOES.

THE new tariff proposals of the Austro Hungarian government involve an increase in the import duty on rubber footwear, per 100 kilograms, from 71.43 kronen [= \$14.28] to 100 kronen [= \$20.30], to enable the domestic factories to produce those higher priced articles of which the imports chiefly consist, and which, it is claimed, are now insufficiently protected. The Austrian imports of rubber shoes have increased rapidly in recent years—from an annual average of 29,040 pounds in weight in

the years 1883-1890, to an average of 386,540 pounds in the last ten years. The annual value during the latter period has averaged \$223,300. The export of such goods meanwhile has assumed considerable proportions. The figures for 1902 were equal to \$288,047 for imports and \$464,383 for exports. Russia, notwithstanding her enormous production for export, lays an import duty on rubber shoes of \$52.78 per 100 kilograms in weight, and in the new German tariff the rate on such goods has been raised from \$14.28 to \$23.80 per 100 kilograms. The value of rubber footwear imported into Austria is estimated at about 600 kronen [= \$121.80] per 100 kilograms.

DOMINION OF CANADA.

OFFICIAL statement, for the last six months of three years, of values of free (crude) and dutiable (manufactured) imports of India rubber and Gutta-percha:

	1900.	1901.	1902.
FREE:			
Great Britain.....	\$ 78	\$ 4,773	\$ 6,367
United States.....	1,290,328	835,483	746,171
Other countries.....	5,225	12,418	513
Total.....	\$1,295,631	\$852,674	\$753,051
DUTIABLE:			
Great Britain.....	\$ 58,246	\$ 93,185	\$139,285
United States.....	196,382	289,597	274,253
Other countries.....	7,870	9,012	7,621
Total.....	\$262,498	\$391,794	\$421,159

THE SOURCE OF PONTIANAK.

WRITING of the gum "Pontianak" in *The India-Rubber Journal*, Dr. C. O. Weber unaccountably says:

In America this product is used to a rather considerable extent, but I am inclined to think that much of the article that passes in America under the above name does not come from Borneo at all, but is the product of the Central American "false" *Castilloa*—that is *Castilloa tunu*.

While the source of this gum is as yet imperfectly known, it is certain that the gum marketed in the United States as "Pontianak" is not of American origin. It is designated in the United States customs returns "Gutta-jelutong," and is credited principally to Singapore, with smaller amounts from Great Britain. The importation from Singapore during the fiscal year 1901-02 amounted to 16,805,752 pounds—or more than the total production of Central American rubbers of all sorts for several years together. Besides, it is not likely that a Central American product would reach New York in sailing vessels—250 to 500 tons at a time—from Singapore. This is in addition, by the way, to our imports of India-rubber.

Mr. H. N. Ridley, F. L. S., in the *Agricultural Bulletin of the Malay Peninsula* (May, 1900—page 249) says of *Dyera costulata* (Hook. fil.): "This is the plant which produces the Jelutong rubber, in the Peninsula," after which he gives a description of the product, which corresponds to that of the gum imported so largely into the United States. The Singapore market statistics which reach this country also describe the material as "Gutta-jelutong." It is true that Mr. Ridley, who is the director of the botanic garden at Singapore, in more recent publications, is less confident that *Dyera costulata* is the plant yielding Pontianak, but this involves no doubt that the gum is of East Indian origin. For the manufacturer, of course, this botanical discussion has little interest. A former dealer in New York insisted that Pontianak was mined, and his customers did not stop to argue with him.

M. Fernand Vivier, after visiting Singapore and Mexico, assures the *THE INDIA RUBBER WORLD* that "Pontianak" and Chicle are identical. Then why should Chicle sell here for ten times as much?

NEW GOODS AND SPECIALTIES IN RUBBER.

THE FISK DETACHABLE VEHICLE TIRE.

THE method of attaching this tire to the rim is novel. It depends in no way upon the air pressure in the tire, and yet the adherence to the rim is such that the tire cannot come off or creep until the clamping bolts have been removed. The tire is attached to a perfectly flat steel rim, which greatly simplifies matters for the wheel manufacturer and for the maker of complete automobiles as well.



The design of the tire is such that the base or the beads are held in such position that the inner tube cannot be pinched and there is no chance, even in the hands of the most inexperienced, of any mistake being made or of the inner tube blowing out when the rings and bolts are once in place. These rings, which hold the tire in place, have an inside angle surface, and the tire is so designed that the beads play the part of an inside coned wedge serving two purposes: first, of clamping the beads together, and second, of locking the base of the tire firmly to the rim, thereby making creeping impossible. The necessity for heavy prying tools is thus avoided, and any one who can use an ordinary S wrench can attach or detach a tire of any size with slight exertion and in a very few minutes, besides which there is the further advantage that all parts of the tire are visible during the operation. Owing to the method of its manufacture, the tire cover when off the wheel assumes the same shape as when attached, which enables the operator to insert the inner tube without fear of its becoming misplaced, pinched, or wrinkled while the tire is being attached. The clamping bolts are provided with a threaded washer and check nut to prevent all liability of their working loose. The entire air space in this tire is above not only the rim, but also the entire clamping device, thereby securing maximum action on the tire, since no portion of the air chamber is in any way confined. The material used is identical with that in the Fisk single tube tire, including the special Fisk fabric, which has proved so successful. The distinctive features of the tire are covered by patents in the United States and abroad. [Fisk Rubber Co., Chicopee Falls, Massachusetts.]

BAILEY'S DUPLEX MASSAGE ROLLER.

THE single rubber massage roller, with its many little rubber suction cups, has already been illustrated and described in THE



INDIA RUBBER WORLD but the double roller shown herewith, while equally efficacious and novel, has some points of difference. To begin, it does twice the work, and the spring from handle to roller gives a secondary massage motion very much like that supplied by the trained

hands of the *masseuse*. The duplex roller is made of the very best of materials, and is having a phenomenal sale. [C. J. Bailey & Co., Boston, Massachusetts.]

"MOBILENE" PACKING FOR AUTOMOBILES.

A SPECIAL packing for gas and gasoline engines, such as are used on automobiles, was bound to be required and supplied. Such a packing is the Mobilene, which is supplied either in sheets 40 inches square, or rolls 40 inches wide, the sheets being $\frac{3}{4}$ of an inch thick and the weight $4\frac{1}{2}$ pounds per square yard. [A. J. Wilkinson & Co., Boston, Massachusetts.]

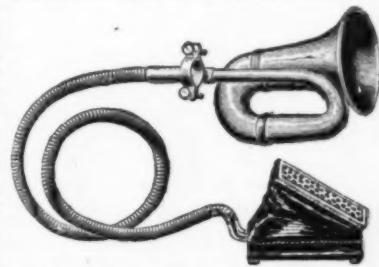
AUTOMOBILE AND FISHING COAT.

A RUBBER garment that has become instantly popular among automobilists and which has also been taken up with enthusiasm by the sporting goods houses for fishermen and huntsmen, is the coat shown in the accompanying illustration. It is really a poncho with sleeves, and will protect the wearer from rain whether seated in an automobile, in a boat, on horseback, or while walking. It is slipped over the head and tied around the neck, while the wristbands are fitted with elastic cord which keeps moisture from getting up the sleeves. It is 50 inches in length, very full in the skirt, and is made in two colors: The tan, which is of pure gum run on light sheeting, weighing $2\frac{3}{4}$ pounds; the black, which is run on a trifle lighter sheeting, weighing $2\frac{1}{4}$ pounds. [Goodyear's India Rubber Glove Manufacturing Co., New York.]



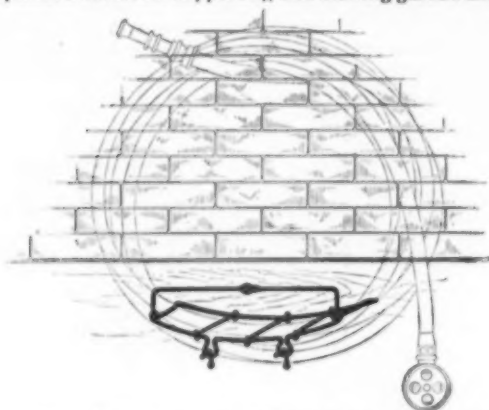
A NEW FRENCH AUTOMOBILE HORN.

THE trade in automobile horns continues to develop novelties, which are useful as well, and one of the most recent is a French production which is illustrated in the accompanying cut. It is a foot operated horn, pressure on a bellows causing a stentorian sound to be emitted, thus leaving the hands free to manipulate the steering of the automobile. These horns are furnished in either brass or nickel finish. [A. H. Funke, No. 325 Broadway, New York.]



A NEW RACK FOR GARDEN HOSE.

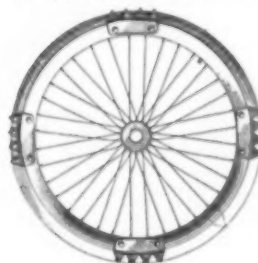
THERE has long been a demand for a practical, simple, and inexpensive device for supporting and stowing garden and lawn



hose. Such a device, to be appreciated and used by the householder, must consist of few parts and be understood at a glance. It would seem that the "Champion" hose rack, shown in the accompanying illustration, fills all of these requirements. It is made entirely of heavy galvanized wire and can be hung by the side of the house, stable, or cellar, where it offers a perfect support for the hose, either in a tight or loose coil, keeping it out of the way, in a good condition, and always ready for immediate use. [Boston Belting Co., Boston, Massachusetts.]

CAULFIELD'S PATENT GRIP WHEEL.

UNITED STATES patent No. 670,664, granted to John Caulfield (No. 74 Nelson street, Brooklyn, New York), relates to the gripping members upon the rims of wheels for automobiles for the purpose of preventing slipping on mud, ice, or snow. It is stated that they can run on ice on a 60 per cent. grade, and one advantage is that they will extend the life of a tire in preventing damage from its tearing loose. They may be easily and quickly removed when summer comes.



TELESCOPIC POCKET ATOMIZER.

THE rubber bulb in this device is so made that when the atomizer is not in use the cylindrical glass reservoir can be pushed into the bulb, forming a very compact instrument, the bulb also furnishing a good protection for the glass when carried in the pocket. The spray tubes are made of glass attached to and forming part of the outer glass tube, which serves as a container for the medication used. The reservoir is designed to hold sufficient for at least one day's treatment. The smaller cut herewith shows the instrument ready for the pocket. The other shows the same when ready for use. United States patent granted October 28, 1902. [Whitall Tatum Co., Nos. 46-48 Barclay street, New York.]



RUBBER COMPLEXION BULB.

THIS illustration suggests the form of a rubber bulb which is offered as capable of being used with advantage in connection with massage cream and other like preparations for facial massage. [The Pompeian Manufacturing Co., Cleveland, Ohio.]



GOODRICH AIR BRAKE HOSE.

THE illustration herewith will give an idea of the method of construction of the air brake hose manufactured by The B. F. Goodrich, Co. (Akron, Ohio), involving a special feature

which is peculiar to their line of hose. This reinforcement



on the inside by a nipple cushion serves to extend the length of satisfactory use, in a way which will be apparent to all who are accustomed to handling air brake hose.

SUCCESS OF A YOUNG ENGINEER.

"IN all the annals of the New South's industrial awakening," says the New York *Sun*, in one of a series of articles on modern conditions in the southern United States, "there could not be found a more typical chapter than is afforded by the extraordinary career of this young southerner"—referring to a man who has taken the lead in cotton manufacturing enterprises at Columbia, South Carolina. This successful man is W. B. Smith Whaley, a native of Charleston. "He had a passion for machinery and had worked his way through New England cotton mills to Cornell [University], and through Cornell to a New England architect's office, whence he was graduated with a good training and an immense amount of enthusiasm." Such had been his preparation for life's work when, in 1892, he settled at Columbia, and, in connection with a partner, under the style of W. B. S. Whaley & Co., invited commissions in mill designing and construction. The firm have since designed mills for sixteen cotton manufacturing companies, employing 539,676 spindles, 14,560 looms, and a capital of \$8,500,000.

But Mr. Whaley has not been content with designing mills; he has organized companies, as well, and is now president of three cotton manufacturing corporations with mills at Columbia, employing \$3,000,000 of capital and working 191,000 spindles and 4620 looms. This represents the largest cotton manufacturing investment in the South, and one of the largest in the United States. One of these mills—the Olympia, with 10 acres of floor area—is not only the most extensive in existence under one roof, but it is regarded as the best and most complete cotton mill in the world. There has come into existence a new and prosperous and more populous Columbia, all through the development of water power into electric power and its application to the cotton industry. Speaking of the success of Mr. Whaley in connection with this development, the New York *Sun* says: "Perhaps nowhere else in the United States would such a career have been possible within the past decade, for nowhere else were such opportunities offered to a young man with the energy and the brains to seize them and make the most of them." Mr. Whaley is yet in his early "thirties."

RECENT RUBBER PATENTS.

THE UNITED STATES PATENT RECORD.

ISSUED FEBRUARY 3, 1903.

- N**O. 719,418. Electric accumulator plate. Auguste Bainville, Nanterre, France.
- 719,425. Process of making self mending tires. John W. Blodgett, assignor to the N Tire Co., both of Chicago, Illinois.
- 719,498-719,499-719,500. Ball [comprising perforated porous or sponge rubber, held under compression by tape or bands, and an outer cover of paper or fibrous material]. Kenyon V. Painter, Cleveland, Ohio.
- 719,529. Fountain pen. Harry W. Stone, Brooklyn, New York, assignor to A. A. Waterman, Cambridge, Massachusetts, and Adolph Briebach, Boston.
- 719,586. Insufflator. Sayer Hasbrouck, Providence, Rhode Island.
- 719,587. Atomizer. *Same*.
- 719,588. Spraying device. *Same*.
- 719,600. Insulating high potential apparatus. Walter S. Moody, assignor to the General Electric Co., both of Schenectady, N. Y.
- 719,687. Hoof boot or pad. George W. Nickerson, Wellfleet, Mass.
- 719,693. Cushion tread horseshoe. Albert J. Puhl, Joliet, Illinois.
- 719,927. Tire [elastic tubular]. Charles H. Wilkinson, Huddersfield, England.

ISSUED FEBRUARY 10, 1903.

- 720,019. Measuring vest [of elastic material]. Robert W. Grendon, Tiffin, Ohio.
- 720,071. Hot air syringe [for use in connection with a lamp and a compressible bulb]. Joseph I. Richards, San Francisco, California.
- 720,281. Machine for coating fabric with rubber. John H. Pearce, assignor to H. Stuart Hotchkiss, both of New Haven, Connecticut.
- 720,482. Process of making shells for playing balls. Francis H. Richards, Hartford, Connecticut, assignor to The Kempshall Manufacturing Co.
- 720,493. Machine for applying elastic bands to articles of manufacture [especially to disc like articles, such as telephone transmitter diaphragms]. Michael Setter, assignor to American Electric Telephone Co., both of Chicago, Illinois.

ISSUED FEBRUARY 17, 1903.

- 720,631. Vulcanizing apparatus. William E. Smith, assignor to the Clifton Manufacturing Co., both of Boston, Massachusetts.
- 720,639. Pneumatic tire [for heavy vehicle wheels] Francesco Toni, London, England.
- 720,648. Syringe. Edward B. Wilder, St. Louis, Missouri.
- 720,737. Playing ball. Francis H. Richards, Hartford, Connecticut, assignor to The Kempshall Manufacturing Co.
- 720,788. Chair pad [for rockers]. Elmer E. Davenport, Denver, Col.
- 720,852. Golf ball. [Combination of rubber body, silk envelop, and outside jacket of Gutta-percha.] Friend W. Smith, Jr., Bridgeport, Connecticut, assignor to Holdredge Co., New York.
- 720,882. Rocker for chairs, hobby horses, etc. Benjamin J. Buckman, Newfield, New Jersey.
- 721,049. Insulating ferrule [for umbrellas and the like.] Howard E. Kern, Allentown, Pennsylvania.
- 721,051. Toy gas balloon. Alfred J. King, Los Angeles, California, assignor of one fourth to Thomas Candy, Chicago.
- 721,112. Device for moistening adhesive surfaces [as postage stamps—involving an elastic cup]. William J. Weaver and Casper F. Hoffmann, Reynoldsville, Pennsylvania.

Trade Mark.

- 39,817. Syringes or douches of rubber. Meinecke & Co., New York. *Essential feature*.—The word "Wonder." Used since October 1, 1902.

ISSUED FEBRUARY 24, 1903.

- 721,138. Clothes wringer. Ross E. Beekman, Independence, Kansas.
- 721,146. Outer cover for pneumatic tires [comprising a canvas or fibrous foundation]. Joseph Butler, Altrincham, England, assignor of two-thirds to William Bell and William A. Jones, both of England.
- 721,192. Rubber mattress. Joseph Holland, Akron, Ohio.
- 721,366. Dress shield attachment [for holding it in place]. Victor Guinsburg, assignor to I. B. Kleinert Rubber Co., both of New York.

- 721,462. Manufacture of playing balls. Francis H. Richards, Hartford, Connecticut.
- 721,463. Golf ball. *Same*.
- 721,549. Fountain pen. August Elberstein, Boston, Massachusetts.

Trade Marks.

- 39,858. Wringing machines. The American Wringer Co., New York. *Essential feature*.—The words "New Home." Used since 1888.
- 39,859. Wringers. The American Wringer Co., New York. *Essential feature*.—The word "Colonial." Used since March 24, 1897.

[NOTE.—Printed copies of specifications of United States patents may be ordered from THE INDIA RUBBER WORLD offices at 10 cents each, postpaid.]

THE BRITISH PATENT RECORD.

[* Denotes Applications from the United States.]

APPLICATIONS—1903.

126. A. S. Morrison, London. Method of attachment of pneumatic tires to rims. Jan. 2.
130. W. H. Rymer, Liverpool. Pneumatic tire. Jan. 2.
147. E. W. Wooders, Manchester. Rubber heel plates for boots. Jan. 3.
218. W. M. Mackintosh and A. Smith, Manchester. Method of manufacture of waterproof fabrics and machinery for the same. Jan. 5.
243. F. H. Lyell, London. Pneumatic tire. Jan. 5.
337. H. Bremer, London. Elastic tire for vehicles. Jan. 6.
395. P. Parker, Glasgow. Pneumatic cycle tire. Jan. 7.
676. E. E. Hill, London. Motor and cycle tire. Jan. 10.
729. B. C. Sellars, Manchester. Improvement in motor tires. Jan. 12.
753. C. H. Gray and T. Sloper, London. Pneumatic tire. Jan. 12.
801. R. Harris, H. J. Harris, and E. W. Harris, Bristol. Rotatable heel for boots. Jan. 13.
815. J. J. Pease and E. Schumacher, Darlington. Improvement in tires and rims for motors. Jan. 13.
841. M. Bray, London. Elastic tread for boots. Jan. 13.
- *868. R. H. Smith, London. Apparatus for vulcanizing and molding rubber. Jan. 13.
875. G. C. Marks, London. Pneumatic tire. (J. R. Brunt and R. C. Pitt, New Zealand). Jan. 13.
- *876. G. C. Marks, London. Golf ball. (Lawrence M. Selzer, United States.) Jan. 13.
879. L. Guignat, London. Pneumatic tire for vehicles. Jan. 13.
898. E. Paris, London. Pneumatic tire. Jan. 13.
- 1,094. V. Gallien, London. Pneumatic tire for vehicles. Jan. 15.
- 1,111. W. H. Jackson, Halifax. Non-slipping fibrous rubber. Jan. 16.
- 1,139. A. Pulbrook, London. Air cushion. Jan. 16.
- 1,142. A. Pollard, London. Pneumatic sanitary respirator. Jan. 16.
- 1,154. Dover, Limited, and H. W. Dover, London. Inflator for tires. Jan. 16.
- 1,211. E. Behnisch, London. Valve for air cushions. Jan. 17.
- 1,216. W. Clifford, London. Pneumatic tire. Jan. 17.
- 1,217. H. O. Tabourdin, London. Non-slipping device for cycle and motor tires. Jan. 17.
- 1,223. S. Fox, Leeds. Pneumatic tire. Jan. 17.
- 1,284. F. S. Ornstien, London. Apparatus for the manufacture of tire covers. Jan. 19.
- 1,285. F. S. Ornstien, London. Method of and means for shaping tire covers. Jan. 19.
- 1,282. J. H. W. Fitzgerald, London. Tire for self propelled vehicles. Jan. 19.
- 1,420. C. Miller, London. Pneumatic tire. Jan. 20.
- 1,426. G. L. Lloyd-Beach, St. Leonards-on-Sea. Pneumatic tire. Jan. 20.
- 1,435. W. C. Lilly, London. Elastic wheel tire. Jan. 20.
- 1,446. N. Spiro, London. Improvement of waterproof garments. Jan. 20.
- 1,452. P. E. Doolittle, London. Appliance for collapsible tire. Jan. 20.
- 1,549. S. H. Sewell, Glasgow. Improvement in cycle and motor tires. Jan. 22.
- 1,552. E. Bert, Liverpool. Resilient tire for cycles and motors. Jan. 22.
- 1,782. W. Simpkin, London. Machine for molding plastic masses. Jan. 24.

PATENTS GRANTED.

[ABSTRACTED IN THE OFFICIAL JOURNAL, JANUARY 7, 1903.]

- 18,290 (1901). Vehicle brake and tire [with detachable outer cover con-

- structed with a view to the use of puncture healing liquid]. A. A. Wade, Leeds.
- 18,351 (1901). Pneumatic tire [with cover attached to the rim by inflation of the inner tube]. L. Johnstone, Manchester.
- 18,475 (1901). Pneumatic tire [with special construction of the outer cover]. J. Hearth and E. E. Preston, Leicester.
- 18,528 (1901). Gutta-percha [freed from air and moisture in a masticator in which a vacuum is maintained]. D. N. Bertram and S. Milne, Edinburgh.
- 18,565 (1901). Toe cap and sole protector for boots [of rubber, metal, or other material]. D. W. John, Runcorn, Cheshire.

[ABSTRACTED IN THE OFFICIAL JOURNAL, JANUARY 14, 1903.]

- 18,931 (1901). Elastic woven fabric [for shoe insertions]. J. Wassertrüdinger, Barmen, Germany.
- 18,945 (1901). Pneumatic tire. C. W. S. Crawley, London.
- 18,964 (1901). India-rubber sheets [for dress shields and non porous garments: made of 100 parts Para rubber, 80 white zinc oxide, 40 magnesia, 6 litharge, and any coloring matter; after being sheeted the mixture is vulcanized cold with acid]. A. C. Blossier, Paris.
- *18,969 (1901). Rubber horseshoe plate. S. McCloud, South Chicago, Illinois.
- 19,030 (1901). Pneumatic tire [method of attachment to rim with wires]. W. Heale, Battersea, Surrey.
- 19,092 (1901). Pneumatic tire [relating to weaving of the outer cover band]. F. Reddaway, Pendleton, Manchester.
- 19,233 (1901). Pneumatic tire [with outer cover attached to the rim by inflating the air tube]. E. A. Preston, Leicester.
- 20,463 (1901). Pneumatic tire [with thickened tread of outer cover and edges flanged to hold the tire in position independent of inflation]. R. Jackson, Altrincham, Cheshire.

[ABSTRACTED IN THE OFFICIAL JOURNAL, JANUARY 21, 1903.]

- *19,541 (1901). Pneumatic tire [with sections inflated through a continuous tube around the rim, having a single valve]. C. Miller, Binghamton, New York.
- *19,589 (1901). Bottle stopper [held in place with wires]. J. B. Crosby, Buffalo, New York.
- *19,672 (1901). Solid vehicle tire [with recesses along its base edges to allow lateral expansion, for preventing creeping]. W. W. Leavenworth, Batavia, New York.

[ABSTRACTED IN THE OFFICIAL JOURNAL, JANUARY 28, 1903.]

- *19,862 (1901). Detachable pneumatic tire. H. E. Erwin, Galesburg, Illinois.
- *20,051 (1901). Pneumatic tire [made of fabric woven specially, to minimise the lateral distension produced by inflation and thus lessen tendency to puncture]. I. S. McGiehan, New York city. (Date of application in United States, April 13, 1901).

THE GERMAN PATENT RECORD.

PATENTS GRANTED—1903.

- 139,820 (Class 39b). Cold process for vulcanizing Caoutchouc and objects made of it. Fr. Boezel, Althötting, Upper Bavaria. Jan. 28.
- 139,722 (Cl. 63c). Rubber tire with wooden core. Charles A. Pettie and Emma C. Pettie, Brooklyn, New York. Jan. 28.
- 140,445 (Cl. 39a). Process for making Golf balls. Eleazer Kempshall, Boston, Massachusetts. Feb. 18.
- 140,424 (Cl. 39b). Process for making artificial leather. Dr. G. Gautier, Paris, France. Feb. 18.
- 140,409 (Cl. 63c). Process for fastening elastic tires. Herbert A. Stonard, Leystone, and Horatio Sheaf, Wanstead, England. Feb. 18.
- 140,452 (Cl. 63c). Rubber air tires. G. W. Pitt and Ed. Martin, London, England. Feb. 18.

PATENTS WITH MODELS FILED.

- 191,076 (Class 15b). Removable handle for stamp, elastically connected with the plate by means of an interlayer of rubber. Leo Boeren, Cologne. Jan. 28.
- 191,113 (Cl. 30d). Rubber urinal, with upper part of Gutta-percha, for men. A. Baumert, Berlin. Jan. 28.
- 191,417 (Cl. 30c). Urethral syringe, consisting of hollow rubber bulb and long pliable tube. Albert Rietz, Berlin. Jan. 28.
- 191,388 (Cl. 34g). Caoutchouc shoe for the feet of chairs and tables. Carl Unger, Köslin. Jan. 28.
- 191,622 (Cl. 47f). Elastic packing rings. Mrs. C. Flugge, Hamburg. Feb. 4.
- 191,886 (Cl. 47f). Gas hose of spiral spring, spirally wound gluten covered textile, and a rubber nozzle. W. Hensche & Co., Elberfeld. Feb. 4.

- 192,176 (Cl. 56b). Pneumatic cushion for army saddles. Julius Jansen, Strassburg. Feb. 11.
- 192,991 (Cl. 11c). Portfolio with elastic bands arranged on the inner side. Emil Stapel, Hamburg. Feb. 18.
- 192,543 (Cl. 45b). Tin or wooden tray with rubber lining, provided with perforations, for holding seedlings when transplanting. Hermann Schumacher, Hans-Dalheim. Feb. 18.
- 192,675 (Cl. 63c). Tires for auto-wagon or cab wheels, with woven rope core and rubber covering. Quadrat-seilfabrik "Patent Bet." G. m. b. H., Mannheim. Feb. 18.

APPLICATIONS.

- 16,464 (Cl. 39b). Process for the manufacture of a substitute for Gutta-percha. Felton u. Guillaume Carlswerk, Akt.-Ges., Mülheim-on-Rhine. Feb. 4.
- 10,566 (Cl. 63c). Elastic tire for vehicles. William E. Carmont, Helmsdale, England. Feb. 4.
- 7,700 (Cl. 45i). Elastic innersole for horseshoes, having a rubber plate between hoof and shoe attached to a pad of soft rubber. Gustav Topp, Frankfurt-on Main. Feb. 18.

NEW TRADE PUBLICATIONS.

JENKINS BROTHERS (No. 71 John street, New York) issue a catalogue for 1903 of their metal valves and similar goods, in connection with which is listed a very full line of rubber pump valves, the Jenkins Standard '96 Packing, gaskets, tubing, union rings, washers, and the like. The rubber goods listed are the product of a factory owned by the firm. The catalogue is illustrated and includes prices. [5"×7½". 80 pages.]

KOKOMO RUBBER CO. (Kokomo, Indiana) issue a new catalogue of Kokomo vehicle tires—solid wired on and cushion—with prices. The cover is embellished with a portrait of Chief Kokomo, some time the biggest man in that community. [3½"×6¾". 16 pages.]—Another catalogue is devoted to their line of bicycle tires, in which the Kokomo "Defender" is the leader. [3½"×6". 8 pages.]

GORHAM RUBBER CO., INC. (San Francisco, and Seattle), are distributing a neat pocket memorandum book, in celluloid covers, with a calendar and information useful for reference, not omitting some details in regard to their full line of rubber goods.

PARKE & PARKE, wholesale and retail druggists at Hamilton, Ontario, have issued a very complete price catalogue of Reliable Rubber Sundries. As it has been designed largely for their out of town customers, many of whom live in places where good stocks of rubber goods are not kept, the amount of postage required for each article is added. The goods listed are principally from the factory of the Davol Rubber Co. (Providence, Rhode Island.) [4½"×7½". 28 pages.]

RUBBERWIDE CO. (Boston) issue a catalogue of Rubber Boots and Shoes with Leather Soles—manufactured under patents—illustrated with styles of goods for the use of miners, ditchers, stablemen, lumbermen, sportsmen, etc. [3¼"×6". 20 pages.]

THE GUTTA PERCHA AND RUBBER MANUFACTURING CO. OF TORONTO, LIMITED, issue, under date of March 16, 1903, their seventh annual catalogue of Rubber Boots and Shoes, to which title is added this year "and Rubber Heels." The production of this company comprises the "Maltese Cross" and "Lion" brands, which are fully illustrated, and list prices given. Several different styles of rubber heels are shown, so prominently as to indicate that this class of goods figures to an important extent in the Dominion trade. [4"×6¾". 64 pages.]

ALSO RECEIVED.

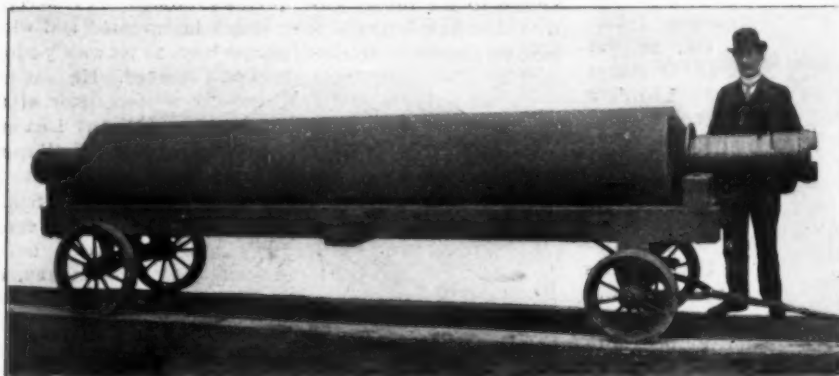
THE B. F. Goodrich Co., Akron, Ohio—The Pickett All Rubber Valve. 4pp.

Apsley Rubber Co., Hudson, Massachusetts.—"Tis a Feat to Fit Feet" [and other leaflets advertising Apsley footwear.]

C. J. Bailey & Co., No. 22 Boylston street, Boston—Bailey's Massage Rollers and How to Use Them. 12 pp.

THE LARGEST RUBBER COVERED ROLLER.

THE art of covering heavy metal rollers for squeeze rolls in various industries, particularly in that of paper making, is notably one of the fine arts of the rubber business. Only those who make and those who use the rolls are aware of the difficulty that is met in vulcanizing a body of high grade rubber so firmly to a mass of metal that no pressure or strain or slip shall allow it to loosen from the roll at any point. A few years



RUBBER COVERED ROLLER FOR PAPER MAKING MACHINE.

ago, the successful covering of small rolls was quite a triumph. To-day, however, such is the progress made that rolls like that in the accompanying illustration are covered accurately and successfully. The roll in question, which is said to be the largest ever covered, is 24 inches in diameter; the length of the face being 161 inches and its total weight being about six tons. The cut shows the rubber roll on its shipping truck in the packing room of the manufacturers, the Boston Belting Co. (Boston).

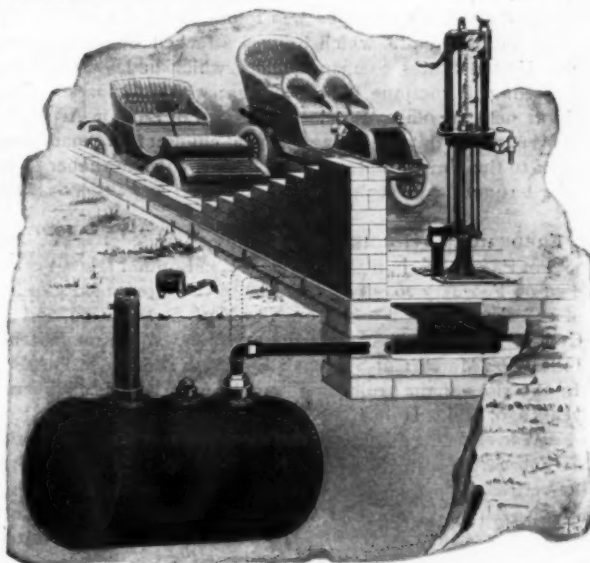
The roll illustrated was made to form part of the largest paper making machine in the world—a straight Fourdrinier machine, built and installed in the mills of The Remington-Martin Co., at Norfolk, New York, by The Bagley & Sewall Co. (Watertown, N. Y.) This machine will finish a continuous sheet of paper, 12 feet 6 inches wide, at the rate of 450 to 500 feet per minute, or four miles in length in an hour or less. The same makers have under contract several other paper making machines practically as large, for which similar rubber rolls will be required.

STORAGE OF GASOLINE AND NAPHTHA.

TIRE manufacturers are not the only rubber men to receive benefit from the extension of the automobile industry. The increased use of gasoline in automobile carriages, and the consequent necessity of having safe and convenient means for storing and pumping gasoline, have stimulated inventors to arrange outfits for that purpose, and many rubber manufacturers have secured them. The outfit illustrated herewith is constructed by S. E. Bowser & Co. (Fort Wayne, Indiana), and has been approved by the National Board of Fire Underwriters and by municipal authorities in many large cities. It consists of a metal tank, which is commonly buried in the ground some distance away from the building in which the gasoline is to be used. At one end of the tank is the filling pipe, so constructed as to project slightly above the surface of the ground. This pipe is covered by a metal cap which is fastened in place by a lock strap. When the cap is open a ball bearing vent valve appears, and this in turn may be unscrewed, leaving an open

pipe for the process of filling. An ingeniously graded measuring rod enables the filling to be done accurately and economically. Tanks are made in various sizes, but are generally constructed from specifications. The range thus far covered, runs from one barrel to a hundred. In some cases, where the building has had no open area available in its neighborhood, the tank has been buried in a solid brick vault in a basement. The air valve, while permitting the ingress of air necessary to pressure, prevents evaporation almost perfectly. A feed pipe and a drip pipe lead from the tank to the building where the gasoline is to be served. The feed pipe connects directly with a suction pump, fitted with self registering indicator of measure, and so constructed that a gallon, a half-gallon, or a quart of naphtha can be drawn at a time. In the tube of this pump is all the gasoline that the apparatus requires to have in the building which it serves—never more than one gallon. It is claimed that the pump is so strongly constructed that it would not explode in a burning building. The drip pipe, which is fitted with a trap, takes

the waste back to the tank. Under ordinary circumstances this pumping arrangement works only to a height of 12 feet above the tank, but special devices have been applied so that in the Providence factory of the Bourn Rubber Co. naphtha is delivered on the fifth floor.



STORAGE TANK FOR GASOLINE AND NAPHTHA.

THE *London Cyclist* mentions a motor cycle that has been run for 5570 miles with only one tire puncture, and several others which had gone from 1500 to 2700 without mishaps to the tires. Mention is made also of motor cycle tires which had gone for a surprisingly long time without reinflation—up to six months in one case. Motor tires stand up well in this respect, the *Cyclist* says, because the inner tubes are thick, approaching more nearly than bicycle tires to being actually airtight.

THE OBITUARY RECORD.

JOHN WOOD KNOTT, who for several years had been in charge of the European depot of the United States Rubber Co., died on March 14 in London, in which city he was born about forty years ago, and where he was educated and spent his business life. After having been engaged for some time in



JOHN W. KNOTT.

connection with the European agency of the American Tobacco Co., he was placed in charge of the London branch of the Boston Rubber Shoe Co., conducting its affairs so satisfactorily that after the merger with the United States Rubber Co. he was made their agent for Europe, with offices at 47, Farringdon street, E. C. Mr. Knott proved to be a man of capacity and his energy in seeking to build up the business in his care was rewarded with marked success, as shown by the increased sale of American rubber footwear in Europe. He had enjoyed the best of health until within two or three weeks of his death, when he was found to be suffering from blood poisoning, after which he was attacked by pneumonia. The United States company's office, which he leaves well organized, will continue for the present without change. Mr. Knott held the office of major in the City of London Artillery. He is survived by a widow and several children. He made two visits to the United States, in connection with the rubber footwear business, as a result of which he gained many friends here.

FREDERICK L. HOLMES, assistant superintendent at the factory in Passaic, N. J., of The Okonite Co., Limited (New York), died on February 26. The members of the veteran association of the Twenty-third regiment, New York State Guard, and of Company I, which he commanded for nine years, attended the funeral, on March 1, at St. John's Episcopal Church, in Passaic. In the riots of the trolley road employes in Brooklyn, several years ago, Major Holmes saw much active service.

=**Warren Scott Sillcocks**, who died in Brooklyn, New York, on February 9, was a native of New Brunswick, N. J. In 1874 he retired from the jewelry trade and organized the Celluloid Novelty Co., which afterward was merged into The Celluloid Co. (Newark, N. J.) He was a director in the latter company at the time of his death.

=**Vernon Bickford**, who had been for thirty-six years a foreman for the Boston Rubber Shoe Co., died on February 28. He was a brother of Erskine F. Bickford, managing director of the Boston company.

=**Joseph W. Smith**, who died at Newton, Massachusetts, on March 21, in his sixty-second year, was president and treasurer of the Smithmade Suspender Co., a business which he had conducted with success for more than thirty years.

=**Henry C. Dimond**, of the firm of H. C. Dimond & Co., Boston, rubber stamp manufacturers, died on March 1, in his six-

tieth year. He had been in the stamp trade about twenty-five years. He made many inventions connected with rubber hand stamps, and invented the life line pistol, for the throwing of the line from a life boat to the vessel needing its assistance.

THE LATE CHARLES FALES PARKER.

AS mentioned in the brief notice of the death of Charles F. Parker, in the last INDIA RUBBER WORLD, he was well known to the rubber shoe interests through his connection with aluminum lasts and trees, which he invented, and which were very favorably received, although not as yet widely adopted.



CHARLES F. PARKER.

He was also proprietor of the Metal Last and Tree Co. (Boston). He died at his home in Somerville at the age of 76 years and 6 months, and, despite his age, was vigorous and active to the end. He knew the shoe business from the bench up. Born at Holliston, Massachusetts, in 1826, he was the son of John Parker and Mary Ann (Fales) Parker, both members of fami-

lies well known in the early shoe trade. Charles Parker's first employment was that of a cutter in the factory of Kimball & Robinson, at Brookfield. About 1850 he went to Boston as a salesman for the same firm, and later became a partner. When the civil war began he was representing his firm in the West, and was at Toledo, Ohio, when the first call for volunteers was made. He realized at once that shoes would be needed by the quartermaster's department, and within forty-eight hours had a contract for 5000 pairs of army shoes—probably the first contract of the kind made on account of the war. During the whole period of the war Mr. Parker was never without a big order from the government, and he took the last order as well as the first. In 1864 he established the firm of Charles F. Parker & Co., with factories at Marlboro and Brookfield, and store at No. 106 Pearl street, Boston. Later the firm became Parker Brothers & Cassel, and for nearly twenty years he manufactured the well known "Solidity Shoe repairing outfits." Mr. Parker married Miss Julia A. Bingham, of Milwaukee, Wisconsin, and his family consisted of three daughters, two of whom, with the widow, survive. For years he was a leading member of the Shawmut Avenue Baptist Church, of Boston, which afterwards merged with the First Baptist Church, the pioneer society of the denomination in that city. For years he was also a prominent worker at the Harvard Street Baptist Church where he led a large class of young men, many of whom became successful in life, and all retaining a warm spot in their hearts for their teacher. Mr. Parker had hosts of friends in the trade with which he had been connected so long, and he commanded the respect of all who knew him. Mr. John H. Parker, a well known Boston manufacturer of specialties in rubber and other footwear, is a brother of the deceased.

NEWS OF THE AMERICAN RUBBER TRADE.

MILWAUKEE TO HAVE A RUBBER FACTORY.

THE Milwaukee Rubber Works Co. was incorporated on March 3, 1903, under the laws of Wisconsin, by Patrick Cudahy, John F. Burke, and G. Stanley Mitchell—all of Milwaukee—with \$200,000 capital. Contracts have been let for factory buildings on a five acre site purchased by the company at Cudahy, a suburb of Milwaukee on the main line of the Northwestern railroad. There is to be a two story main building, 40 × 200 feet, and three wings, each of one story and 45 × 150 feet. The machinery has been bought, including a 350 HP. engine and boilers of 450 HP. capacity. The company intend to manufacture a general line of mechanical rubber goods, including vehicle and cycle tires, and all kinds of mold work. The location is in the heart of a large mining district, calling for extensive supplies of rubber, besides which it is a good general trade center for a number of rich states. The company expect to be ready to book orders about June 15. The board consists of Patrick Cudahy, G. Stanley Mitchell, Charles T. Burnham, William Becker, John F. Burke, M. R. D. Owings, and George P. Mayer. The officers are:

President—G. STANLEY MITCHELL.
Vice President—CHARLES T. BURNHAM.
Secretary—CHARLES W. HARRIS.
Treasurer—HOWARD E. MITCHELL.
Assistant Secretary—GEORGE E. BURNHAM.
Superintendent—F. HASKELL SMITH.

The new company was promoted by Charles A. Rohde, of Milwaukee, and Charles W. Harris, of Akron, Ohio, both of whom are well known to the rubber trade. Mr. Rohde, until recently, sold the output of the Goshen Rubber Works, and Mr. Harris resigned as manager of the factory of the Consolidated Rubber Tire Co. at Akron to start the new enterprise at Milwaukee. Mr. Smith, the superintendent, who is a graduate from the Massachusetts Institute of Technology, was with the Hartford Rubber Works Co. four years in the experimental department, and with The Diamond Rubber Co. three years as assistant to the superintendent.

PRESIDENT JONES OF THE MANHATTAN RETIRES.

FOR some time Mr. Frank Cazenove Jones, president of The Manhattan Rubber Manufacturing Co. (New York), has been feeling the effects of overwork, and on the advice of his physicians, who prescribe a long rest, he has resigned his official position. The list of officers has been rearranged, therefore, as follows:

President—ARTHUR F. TOWNSEND, lately vice president.
Vice President—ELIOT M. HENDERSON, lately treasurer.
Treasurer—J. M. FERRIS, lately secretary.
Secretary—F. L. CURTIS.

The board of directors consists of the above named and William F. Gaston, W. W. Dashiell, Alexander Henderson (superintendent of factories), and E. B. Townsend. The company was incorporated in New Jersey, October 30, 1893, and soon afterward put into operation a new mechanical rubber goods factory at Passaic, New Jersey. Mr. Jones, who previously was a director and manager of factories of the New York Belting and Packing Co., Limited, was elected president and general manager of the company at the beginning, and has since worked continuously and successfully in building it up into one of the leading rubber concerns in the country. Mr. Townsend, who also had been connected with the Belting and Packing company, beginning as secretary and treasurer of the new

company, was elected in October, 1894, to the office of vice president, which he has since held. Mr. Dashiell, named above, was one of the original directors. The authorized capital of the company, under its charter, was \$150,000, of which only \$75,000 was paid in at the beginning. The capital has been increased from time to time, and since October last has amounted to \$500,000.

Mr. Jones was one of the most capable all round manufacturers of mechanical goods in the country. He brought to his task the equipment of a thorough knowledge of chemistry, of mechanical engineering, and unusual business acumen. The following resolution was passed by the board of directors of the Manhattan Rubber Manufacturing Co., when they reluctantly released him from active service:

WHEREAS, Mr. Frank Cazenove Jones, president and general manager and director of this company, has for a long time, by means of ill health and physical disability, been unable to discharge the duties pertaining to this office; and

WHEREAS, There seems to be no likelihood of his immediate recovery; and

WHEREAS, Mr. Jones is unwilling that the affairs of this company should suffer from the fact of his inability to attend to the same, and has consequently tendered his resignation as president, general manager, and director of this company to this board; therefore be it

Resolved, That the resignation of the said Frank Cazenove Jones, president, general manager, and director as aforesaid, be accepted, and that the secretary of this board convey to him our heartfelt sympathy in this his time of physical disability.

REVERE RUBBER CO. EMPLOYEES AT A BANQUET.

THE Revere Rubber Co. (Boston) occupied its quarters at No. 63 Franklin street so many years that it was the only business home of nearly every one of the office employés. When it was announced that they were about to remove to No. 77 Bedford street, a suggestion that the giving up of the old home should be commemorated in some way was received with enthusiasm, and the result was a banquet at the United States Hotel, Boston, on the evening of February 27, attended by thirty of the company's clerks and salesmen. It was arranged by a committee consisting of J. Arthur Wade, Charles A. Case, C. H. S. Wetmore, and A. L. Belcher. There was speeches and stories and a "highamophone" entertainment, and the pleasures of the evening were finished by attendance at the Columbia Theater. The menu was as follows:

"UP RIVER" BLUE-POINTS.
 Mock Turtle a la "Usdurian."
 "Old Hickory" Olives.
 "Granite" Stuffed Smelts, fine herb sauce.
 Iced Cucumbers, corrugated. Windsor Potatoes, double jacketed.
 Rubber Neck Turkey, cranberry sauce.
 "Four Ace" Tenderloin of Beef, mushroom sauce.
 Caucho Potatoes. Green Peas, soft cure.
 "Eclipse" Shrimps in cases, Newbury.
 "Ideal Air Cushion" Fritters
 With "A. C. Special Racing Banner" Sauce.
 Charlotte Russe, washed and sheeted.
 Pontianac Wine Jelly.
 "P. G." Harlequin Ice Cream.
 Frozen Pudding, desulphurised.
 Assorted Cake, burlap back. "Little Giant" Fruits.
 Harlem Water Wafers. Fine Para Cheese.
 "Giant Brand" Coffee.

The clerks from the Chelsea office appeared with tags in their button holes, to prevent the possibility of their being lost

during their visit to the city. Altogether the occasion proved so delightful to those present that already they speak of it as their First Annual Banquet, and doubtless it will become a regular institution. A record of the banquet, which has been printed handsomely, in pamphlet form, is certain to be treasured by all who shared in it.

APSLEY RUBBER CO. (HUDSON, MASS.)

CONTRACTS have been awarded for an addition to the boot and shoe mill that will double its capacity. The addition will adjoin the main building at the east end, and will be of brick, six stories, 62 x 80 feet. This is to be completed in July. The machinery will be supplied by the Farrel Foundry and Machine Co. The Apsley company have been putting in two additional elevators and have more than doubled their steam plant, putting in a 400 HP. boiler. They have added seven new mills with interchangeable calendars and washers, and are making a number of other improvements which, when completed, will afford a capacity for 15,000 pairs of rubber boots and shoes per day, in addition to their mackintosh and rubber clothing business. The company manufacture their own packing boxes and have their own last factory (the Millay Last Co.) The Hon. L. D. Apsley, president of the company, began the manufacture of mackintoshes at Hudson in 1883. The manufacture of rubber footwear was begun in April, 1900, and at once became an important and successful branch of the company's business.

NATIONAL INDIA RUBBER CO., BRISTOL, R. I.

BUSINESS continues very brisk in every department of the factory. The insulated wire department has been run at night for some time past, in order to turn out the work required of it. It has been decided to remove the insulating department from its present location to the east end of the brick building at the north side of the plant, where three floors will be occupied. Additional machinery is to be installed and it is expected that 150 hands will be employed in this department after the changes have been made.

THE WESTERN RUBBER CO. (GOSHEN, INDIANA).

THE plant of this company, although not the largest in their line, is capable of turning out a very large amount of high priced work. The buildings consist of a large three story brick structure, the ground floor of which is used for a mill room, and which has a washer, two large grinders, a calender, a tubing machine, and several presses. In the rear of this is the engine and boiler house, and at one side a dry house for rubber and compounding material. The plant is close to the tracks of the "Big Four" railway.

REESE WATERPROOF MANUFACTURING CO.

A TRACT of six acres in Oakland, California, has been acquired by this company, mentioned in THE INDIA RUBBER WORLD of September 1, 1902, as having been incorporated under California laws, with \$200,000 capital, to waterproof goods by a newly patented process. It is reported that an extensive factory is to be erected. The business office of the company, No. 1571 Seventh street, Oakland, is in charge of the vice president and general manager, J. W. Phillips.

CONCORD JUNCTION RUBBER WORKERS' UNION.

RUBBER Workers' Union 9856, A. F. of L., at Concord Junction, Massachusetts, on December 23, 1902, reorganized as Local No. 2, of the new International Amalgamated Rubber Workers' Union of America, affiliated with the American Federation of Labor, with Clarence E. Akerstrom, president. On February 25, 1903, the Concord Junction union adapted a resolution condemning the Boot and Shoe Workers' Union and commending the Knights of Labor, in connection with labor troubles in the leather shoe factories at Lynn. On March 2, 1903, Clarence E.

Akerstrom, as national secretary-treasurer of the Amalgamated Rubber Workers, wrote a letter to the general president of the Boot and Shoe Workers, stating that the resolution of the Concord Junction union—his own Local—was "an illegal act," inspired by a few "radical, irresponsible people who are trying to disrupt that local"; that the four principal officers of the local had resigned in consequence; and that "the local was suspended and its charter revoked this evening."

AFFAIRS OF THE CRUDE RUBBER CO.

JUSTICE LACOMBE, in the United States circuit court at New York, on March 10, signed an order appointing John J. Townsend a special master to take proof and report as to what persons are entitled to share in the distribution of funds coming into the hands of the receivers of the Crude Rubber Co. The creditors were allowed until April 21, 1903, to file their respective claims at No. 20 Nassau street, the office of the receivers. An application to extend the time was denied.

THE KEMPSHALL MANUFACTURING CO.

GOLF ball patents have been issued recently to Emmet Schultz, of Arlington, New Jersey, assignor to the Arlington Co., of the same address. The Arlington Co. was incorporated January 31, 1899, under New Jersey laws, the papers being signed by Henry S. Chapman, Edward N. Crane, Emmet Schultz, L. Stoughton Ellsworth, and R. H. Ensign. THE INDIA RUBBER WORLD is informed that "All patents of The Arlington Co., on golf balls, etc., belong to the Kempshall Manufacturing Co. [Arlington, N. J.], and goods made under said patents will be put out by the Kempshall company." Messrs. Chapman and Crane, mentioned above, are now officers of the Kempshall Manufacturing Co.

THE NEW YORK FIRE HOSE FRAUD CHARGES.

JUSTICE SCOTT, in the New York supreme court, on March 12, dismissed the demurrers to the indictments against former Fire Commissioner John J. Scannell and William L. Marks. They were indicted for conspiracy to defraud the New York fire department while Scannell was commissioner. This decision means that they must stand trial. The indictments were filed on November 22, 1901, and charge the defendants, among other things, with awarding contracts for fire hose to others than the lowest bidders. Further details appeared in THE INDIA RUBBER WORLD August 1, 1901 (page 336) and December 1, 1901 (page 90).

LARGE FIGURES IN A LAWSUIT OVER TIRES.

THE National India Rubber Co. on March 11 filed two suits in the Rhode Island supreme court, at Providence, against the Rubber Goods Manufacturing Co., for the aggregate sum of \$160,000. In the first suit the plaintiff corporation alleges that on November 9, 1899, it became a party to an agreement involving the transfer, to the New York brokerage firm of F. S. Smithers & Co., acting as agents of the Rubber Goods Manufacturing Co., of the special machinery in the factory used in making rubber tires, and the stock of tires and tire material then on hand. The consideration was \$10,000 for the machinery and \$49,000 for the material, payment being accepted in the form of 590 preferred shares of the Rubber Goods Manufacturing Co. at par—or \$59,000—with a guarantee that within three years these shares would be redeemed, besides paying dividends at the rate of 7 per cent. per year. On November 8, 1902, the last business day of the three years, the 590 shares, it is alleged, were tendered to the Rubber Goods Manufacturing Co., which corporation refused to pay \$59,000 for the same. Whereupon the National company sues, and lays its damages at \$100,000.

In the second suit, the complainant alleges that, following

the above mentioned sale of machinery and tire material, it was agreed between the National and the Rubber Goods companies that the former should sell the tires, and work up the material on hand, and continue thereafter to make and sell tires for the account of the defendant corporation. The National company worked under this arrangement, it alleges, until instructed to stop, at which time the expenses incurred, in excess of receipts from the sale of tires or otherwise, had amounted to \$31,893.78. The amount claimed as damages in this suit is \$60,000.

FAILURE IN THE ELASTIC WEBBING TRADE.

DRESSER & CO., doing a wholesale commission business in hosiery, silks, and webbings, Nos. 15-17 Greene street, New York, made a general assignment on March 7, and later in the day a petition in bankruptcy was filed against the firm by an attorney for several creditors. The liabilities were stated at \$1,250,000, and the nominal assets at \$750,000, with actual assets much smaller. The head of the firm is Daniel Le Roy Dresser, until lately president of the Trust Co. of the Republic and the Merchants' Association of New York. Mr. Dresser's first business venture was made as selling agent in New York for the E. Read Goodridge Manufacturing Co. (Newport, R. I.), makers of elastic webbing. In 1891 he organized the firm of Nealon, Goodridge & Dresser, succeeded in 1894 by Dresser & Goodridge, which dissolved in 1896 after the Goodridge factory was closed by the sheriff (May 19), under attachments from creditors, including Dresser & Goodridge, claiming \$150,000 for advances on goods. At a sheriff's sale the stock and fixtures at Newport were bought by Mr. Dresser for \$50,000. Early in 1897 the Naragansett Web Co. was organized in Newport, and has since been engaged successfully in operating the plant referred to. Mr. Dresser is a director in the Naragansett company, and also in the American Tubing and Webbing Co. (Providence). Mr. Dresser for a while had another rubber goods account, beginning in 1896, when he was selling agent for the Goodyear Vulcanite Co.'s combs. Mr. Dresser's partner (since 1897), Charles E. Riess, said: "This failure did not result from any decline in the firm's business. We have been making a net profit right along of \$60,000 to \$80,000 a year. Naturally, I was surprised to learn that it was necessary for us to make an assignment." It is understood that the firm's inability to meet its obligations was due to its bank credits becoming impaired on account of some of Mr. Dresser's outside business ventures. He was, for instance, interested in the underwriting of the United States Shipbuilding Co.—an undertaking not altogether successful. Judge Holt, of the United States district court, in New York, on March 11, signed an order in the case of Dresser & Co., authorizing the receivers to continue the business, not exceeding forty-five days. There are large orders in hand for goods to be made, including orders amounting to \$100,000 to be filled by the American Tubing and Webbing Co.

The American Tubing and Webbing Co. (Providence, Rhode Island) on March 9 was placed in the hands of a temporary receiver, on application of Maurice H. Cook, a stockholder. The temporary receiver was Lorin M. Cook, father of the petitioner. On March 14 Lorin M. Cook and Willard C. Perkins were appointed receivers. It is alleged that the treasurer of the corporation issued drafts drawn on Dresser & Co., which were accepted by the latter for their accommodation, and not for the business of the corporation, which drafts are now maturing, and by reason of which it is alleged that the corporation is insolvent while the business is prosperous. The appointment of receivers was for the purpose of allowing the business to be conducted without liability of attachment. The capital of the concern is \$276,000. The assets are reported at \$115,596 over the liabilities. The factory has been employing 250 hands.

BICYCLE REORGANIZATION.

PAPERS of incorporation for the Pope Manufacturing Co. were filed under the laws of New Jersey on February 27, the object of the company being the manufacture of bicycles. The capital stock is \$22,500—of which \$2500 in 6 per cent. cumulative first preferred shares and \$10,000 each in 5 per cent. non-cumulative second preferred and common shares. The incorporators are Mountford Mills, George E. Hargrave, and Dunlevy Milbank, but it is understood that the leading spirit in the enterprise is Colonel Albert Augustus Pope, the foremost figure in the American bicycle industry. It is assumed in the trade that the new company will acquire the assets of the American Bicycle Co. and its subsidiary, the American Cycle Manufacturing Co., when details have been arranged so that the property can be transferred from the receivers to the new organization. It is common report that Colonel Pope, who had large holdings in the American Bicycle Co., practically dictated the reorganization plans now being carried out, and that he is confident that room exists for a successful bicycle industry. It is pointed out that in the year before the combination of the bicycle industry as the American Bicycle Co., the Pope interest made a net profit of more than \$700,000. Colonel Pope for a number of years owned the Hartford Rubber Works, first for supplying single tube tires for his "Columbia" bicycles, and later for supplying tires to the trade as well. He parted with this holding in connection with the sale of his bicycle interest to the bicycle trust.

THE COMMERCIAL CABLE CO.

THE unissued capital stock, amounting to \$1,666,700, has been issued lately (to be applied towards the company's investment in the Commercial Pacific Cable Co.), and on March 3 was listed on the New York Stock Exchange, making the total amount of capital issued and listed \$15,000,000. The report presented at the annual meeting of shareholders in New York on March 2 showed gross earnings for 1902 from the Atlantic cable and land line (Postal Telegraph) systems, of \$10,208,292.71. Interest on 4 per cent. debentures amounted to \$800,000; dividends (8 per cent.), \$1,066,664; added to reserve fund, \$350,000 (raising it to \$4,934,510.23); added to reserve for insurance of stations, apparatus, etc., \$150,000 (raising the fund to \$860,209.60); balance of revenue account, \$147,529.19. There was expended during the year, for land line reconstruction, repairs, and reserve for extensions, \$1,806,015.06. The new stock will share in the dividend for the first quarter of 1903. President Charles H. Mackay said, in submitting the report: "After the completion of the Commercial Pacific Cable it is expected that the earnings of the company will be materially increased."—At a special meeting of the shareholders, also held on March 3, a proposition to increase the capital stock from \$15,000,000 to \$25,000,000 was approved.—Dividend No. 55—a quarterly dividend of 2 per cent.—will be due on April 1 to stockholders of record on March 20.

PITTSBURG ASBESTOS REDUCTION CO.

THIS company was incorporated on January 29, under Pennsylvania laws, with \$1000 capital, to control a process for the treatment of asbestos invented by John F. Green, lately of Baltimore, and its application to the electrical industry. Mr. Green advises THE INDIA RUBBER WORLD: "We have made many admixtures of rubber and asbestos for insulating purposes, and are enabled to get results with our purified asbestos greater in every respect than the admixtures heretofore made with the articles named. We claim that after we have processed our asbestos, and have removed the metallic oxides, a large percentage of lime and magnesia, we have a new product, commercially, in asbestos. As we get a larger percentage in any given quantity of asbestos because of the removal of foreign matter,

this purified asbestos having great capillary attraction, and more hygroscopic conditions, it will more readily unite with the density of rubber than any other asbestos, which enables us to make a more perfect mass, and we find that it is one of the best, if not the best article to go into the vulcanizer with rubber. We have had great results along electrical insulation, and yet see a greater field in many uses to which asbestos is put in the rubber industry, namely: the admixture of this purified asbestos with rubber will make a lighter compound, and yet equally as good as at present, for all articles for toilet use, and in fact all the other small wares. We also think it possible to make various colored rubbers by the use of our prepared asbestos." Mr. Green is manager of the new Pittsburgh company, and others interested are Charles K. Hill, J. Q. H. Smith, and H. C. Van Tine, all of Pittsburgh.

OIL CLOTH PRICES DEPEND ON RAW MATERIAL.

ALL previous prices of the Standard Table Oil Cloth Co. have been withdrawn, in connection with which the sales agent for the company, at New York, is quoted as follows: "On account of the increased demand for oil cloths, the Standard Table Oil Cloth Co. have withdrawn their quotations on their product, as they do not desire to be in a position where they would be obliged to turn down any speculative orders. We are supplying the trade with what they need and will take care of all our customers. We will not issue any price list until some time later, and whether these prices will be higher depends entirely on the condition of the raw material market. The officers of the company as a whole are opposed to any advance." The prices withdrawn by the Standard Table Oil Cloth Co. are as follows (per piece):

5-4 Mosaics.....	\$1.80	5x6 Brocade covers.....	2.25
6-4 Mosaics.....	2.40	5x6 Black and wood covers..	2.40
5-4 White marbles.....	1.95	48-in. Flannel back white	
5-4 Printed white glazed... 1.95		glazed and marbles.....	3.50
6-4 White marbles.....	2.55	5-4 Turkey red back mosaics	2.30
6-4 Printed white glazed... 2.55		5-4 Turkey red back marbles	2.45

UNITED AND GLOBE RUBBER MANUFACTURING COS.

GROUND was broken on March 13 for a three story brick and stone addition, 86 X 40 feet, to the plant of this company at Trenton, New Jersey. Contracts have been let for the most modern machinery and equipment. The new structure will be used exclusively for making hose and belting, and will allow for the employment of 50 or more additional hands.

NOT A RUBBER STAMP FACTORY.

RESPECTING a recent report on a large rubber stamp factory at Lodge, Northumberland county, Virginia, Mr. Benjamin Chambers, of that place, advises THE INDIA RUBBER WORLD that rubber stamps are not made at the place named. His specialty is steel types and steel stamps. Mr. Chambers has been for 35 years contractor for such stamps used in the United States postal service, and makes all the stamps used for postmarking letters and cancelling postage stamps on letters. The machinery department of his plant recently has been considerably enlarged.

GROWTH OF A MINNEAPOLIS JOBBING HOUSE.

THE Plant Rubber Co. (Minneapolis, Minnesota) have signed a lease for ten years for a building to be erected on First avenue N, between Third and Fourth streets. During the last three years the business of this company has increased very rapidly, so that the present quarters, running from No. 210 Nicollet avenue to No. 211 Hennipen avenue, have been outgrown. The firm expect to get into the new building in August next. This will be 43 feet front and 132 feet deep, five stories, and containing about 30,000 square feet of floor area. This business was established eight years ago as the Nott &

Plant Rubber Co., to do a retail business. A year later F. W. Plant moved to Minneapolis from New York city, assuming the management and changing the business from retail to wholesale. Within another year Mr. Plant purchased the interest of W. S. Nott—now at the head of W. S. Nott Co. (Minneapolis)—since which time the business has been known as the Plant Rubber Co., with F. W. Plant president. They are manufacturers of leather belting and mackintoshes, and jobbers of rubber goods of all kinds. They have offices at Duluth and Seattle, with ten traveling salesmen employed.

TRADE NEWS NOTES.

THE Revere Rubber Co. have removed their Boston offices from No. 63 Franklin street to No. 77 Bedford street, where they have more room, in a modern office building, provided with every convenience for officers and employes, and for the display of their full line of goods.

=The strike in the rubber shoe factory of the Hood Rubber Co., at East Watertown, Massachusetts, which began nearly two years ago, has been officially declared at an end, the company agreeing to take back the strikers as places can be made for them. Most of the strikers, however, have gone elsewhere and secured employment.

=The annual meeting of shareholders of the Consolidated Rubber Tire Co. will be held in Jersey City on Monday, May 4.

=John H. Merrill has taken charge of the carriage tire department of the Manhattan Rubber Manufacturing Co. (New York). He was formerly manager of the Chicago branch of The India Rubber Co. (Akron, Ohio).

=Charles S. Prosser has been appointed general sales agent of the Peerless Rubber Manufacturing Co. Mr. Prosser is fully qualified for such a position, having been five years in the factory, and five years as traveling salesman for the company.

=Leonard J. Lomasney has been appointed sales manager of the Republic Rubber Co. (Youngstown, Ohio). He is a son-in-law of Walter Arms, the new president of the Republic Rubber Co., and was formerly with the Peerless Rubber Manufacturing Co.

=Lewis D. Parker, of Hartford, president of all the tire manufacturing companies controlled by the Rubber Goods Manufacturing Co., spent last month in Chicago, at the Morgan & Wright factory, to allow J. C. Wilson, who is in charge, to take a much needed vacation.

=A. H. Brown, purchasing agent for the Boston Rubber Shoe Co., has been appointed assistant purchasing agent for the United States Rubber Co., and will be connected hereafter with their general offices, in New York.

=Quaker City Rubber Co.—Charles A. Daniel, proprietor (Philadelphia), announce the appointment, as manager of their Chicago branch, of J. T. Moore, who has been with the firm several years and has had much experience in the rubber and packing business. He succeeds as manager in Chicago S. F. Denny, whose new connection at Detroit, Michigan, has been mentioned in this paper already.

=W. Heath Kirkpatrick, identified for ten years past with the rubber tire trade, first with the American Dunlop Tire Co., and later with that company and the Hartford Rubber Works Co. in conjunction, has become general sales manager for the Peerless Motor Car Co., at Cleveland, Ohio.

=The machinery was started at the factory of the new Sweet Tire and Rubber Co. (Batavia, New York) on February 24.

=The Vulcanized Rubber Co.'s factory, at Morrisville, Pa. is reported to be well supplied with orders. They are mentioned as being especially busy on telephone receivers and appliances.

=The European depôt of The B. F. Goodrich Co., at 7, Snow Hill, London, E. C., have taken the agency for Bailey's rubber massage rollers, together with the C. J. Bailey & Co. line of patented specialties, a large shipment of the goods having just gone forward. The firm of E. W. Pidgeon & Co., Limited, of Christchurch, have taken the agency for New Zealand.

=The Hanover Rubber Co., which recently started in the waterproofing business at Greenpoint, Brooklyn, New York, has gone out of business.

=F. B. McIlroy, Chicago manager of the Trenton Rubber Manufacturing Co., is on a business trip West, visiting the different agencies of the company. His trip will extend to the Pacific coast, and from Vancouver to the City of Mexico, Mexico.

=The bill in equity of Charles R. Flint, of New York, seeking to hold Theodore A. Dodge and others personally liable as directors—at one time—of the Boston Woven Hose and Rubber Co. for an unsatisfied judgment for \$22,503 which he recovered against the corporation in June, 1901, was dismissed in the superior court at Boston on October 23, 1902 [see THE INDIA RUBBER WORLD, November 1, 1902—page 62.] Appeal having been made to the supreme court, that body on February 28 last affirmed the decree of the superior court.

=Fire at Marion, Indiana, on the night of February 6, caused a loss to the Marion Rubber Co. (rubber shoe jobbers) of \$10,000, which was covered by insurance.

=Clark-Hutchinson Co., Boston and New York shoe jobbers, have added the sale of the "Goodyear-Glove" line to their rubber department.

=The Cambridge Manufacturing Co. are mentioned as having leased a vacant factory plant at Southington, Connecticut, to be used in making golf goods, including a new golf ball in which W. T. Dale is interested.

=The Neptune Rubber Co. (New York) who have been in the retail mackintosh trade for six years, are closing out their stock at No. 295 Grand street, and will remove to Nos. 23-25 Lispenard street, where they will engage exclusively in manufacturing for the wholesale trade.

=Morris & Co. (Yardville, New Jersey), manufacturers of the Morris spring-bottom duck baskets, are in receipt of a repeat order for a large number of duck mill baskets from an important textile mill. They have recently supplied the Ashley & Bailey Co. (Paterson, N. J.) with a large number of bags for shipping silk and are constantly filling orders for this class of trade.

=The Goodyear Rain Coat Co. have again closed out their stock of rain coats and mackintoshes at "forty cents on the dollar." This time it happened in Boston, during the week of March 9-14.

=August Belmont and Charles R. Flint, stockholders and creditors of the Safety Bottle and Ink Co. (Jersey City, New Jersey), on March 16 secured an order in chancery directing that concern to show cause why a receiver should not be appointed. The assets of the company are said to be \$53,000 and the liabilities \$99,000. Messrs. Belmont and Flint are equal creditors in \$77,250 of the indebtedness. The company was organized in March, 1895, with \$250,000 authorized capital. It has a \$10,000 plant in Jersey City which the complainants allege has been operated at a loss of \$96,000.

=Mr. John H. Flint, treasurer of the Tyer Rubber Co. (Andover, Massachusetts), has been spending the latter end of the winter in the South.

=Mr. Paul N. Towner, of the firm of Towner & Co., jobbers of Rubber goods at Memphis, Tennessee, was a visitor to New York and Boston during the latter part of March.

=Edward H. Garcin has taken charge of the New York office of the Trenton Rubber Manufacturing Co., at No. 35 Warren street, and is giving special attention to the development of the company's export trade—a branch in which they have been very successful.

=W. R. Macdonald has become connected with the Enterprise Rubber Co., and will sell "Candee" and "Federal" brands of rubber footwear for them, with the state of Massachusetts as his territory. Mr. Macdonald was in employ of the Stoughton Rubber Co. up to the time of the discontinuance of their rubber shoe department, after previously having been for years with the Boston Rubber Shoe Co.

=The Methuen (Mass.) Rubber Co., manufacturers of insulating specialties, have leased the Swain factory in their town and ordered additional machinery, on account of the growth of their business.

=The Milford Rubber Co. (Milford, Massachusetts), waterproofers for the trade, have decided to add to their business the manufacture of garments.

=The salesmen of the Lambertville Rubber Co. (Lambertville, New Jersey) have started for their respective localities for the season. The company anticipate a busy year for 1903 in all different branches. Thomas Crowley, superintendent of the boot and shoe department, is pushing his patent rubber heel boot, and says the sales last year amounted to nearly 2500 pairs. A. T. Schermerhorn is meeting with success in pushing his patent sole shoe.

=During the winter's coal famine all the employes of the Mercer Rubber Co. (Trenton, New Jersey) who so desired, were supplied with soft coal from the company's stock at \$5 per ton. This action averted a serious famine among the workmen and was greatly appreciated.

=Two hundred and seventy shares of the Seamless Rubber Co. were offered at sheriff's sale, at New Haven, Connecticut, on March 31, to satisfy a court judgment of \$22,630, against Earle Brothers (New York), in favor of the New York Commercial Co., a result of a suit over a consignment of crude rubber which, begun in 1896, has gone through many stages up to the supreme court of Connecticut.

=The factories of the Boston Rubber Shoe Co. were closed for stocktaking on the two last days of March, the usual spring vacation being postponed on account of the great number of unfilled orders.

=Patrick J. O'Connor, of Naugatuck, Connecticut, was arrested recently on a charge of using the mails fraudulently. He is alleged to have advertised to sell rubber boots of any size at \$1 a pair, and when a dollar was sent to him he shipped miniature boots, such as are sold for toys or ornaments.

=Twelve small boys were arrested recently for the theft of \$400 worth of old rubber from a freight car at Buffalo, New York, and three junk dealers, alleged to have bought the rubber from the boys, were arrested on the charge of receiving stolen property.

=The regular quarterly dividend of 1½ per cent. on the preferred stock of the American Chiclé Co. and the monthly dividend of 1 per cent. on the ordinary shares, is payable on April 1, at New York.

=Trenton Local No. 4, of the International Amalgamated Rubber Workers' Union of America, has been organized at Trenton, New Jersey, with Julius Kohlenberger, president; E. S. Decker, vice president; James O'Donovan, recording secretary; Walter Sigley, financial secretary; and John O'Connell, treasurer. Local No. 1 exists in Chicago; No. 2, at Concord Junction, Massachusetts, has been closed, and No. 3 is at Cambridge, Mass.

A \$300,000 TIRE SUIT.

SUIT has been filed by the New Brunswick Tire Co. against the Rubber Goods Manufacturing Co., claiming damages in the sum of \$300,000. It is alleged by the complainants that in 1889 an agreement was entered into by which their real estate and manufacturing plant at New Brunswick, New Jersey, were to be transferred to F. S. Smithers & Co., brokers, of New York, acting as agents for the Rubber Goods Manufacturing Co., for \$100,000, to be paid for in preferred stock of the latter concern, at par. The transfer also included raw material and manufactured goods, inventoried at \$118,000 additional. The nature of the suit, and of the details leading up to it, are similar to those reported in another column in relation to the suit filed against the same defendants by the National India Rubber Co.

THE SIEMON HARD RUBBER CORPORATION.

THE incorporation of this company at Bridgeport, Connecticut, was mentioned in our issue of March 1, since which time their plant has been put in operation for the manufacture of insulation goods from a special material of high heat resisting qualities. It is understood that the company have booked an encouraging number of orders. The officers of the company are: Carl F. Siemon, president and treasurer; Herbert L. Smith, vice president and superintendent; John Taylor, secretary. Mr. Siemon was formerly associated with the Dickinson Hard Rubber Co. (Springfield, Massachusetts) as manager and superintendent, a position which he held for five years. The heads of departments in the new company are men who have been associated with Mr. Siemon for a number of years.

THE ALLING RUBBER STORES.

NOYES E. ALLING, who for a number of years had been engaged in selling rubber goods at Bridgeport, Connecticut, under the name Alling Rubber Co., on March 4 sold his interest in that business to the Alling Rubber Co., of New Haven, incorporated under Connecticut laws, May 9, 1901, with \$6,000 capital. At the same time the capital stock of the corporation was increased to \$18,000, all paid in. This company now owns the New Haven store, established in 1901, and the Bridgeport store. The officers are: Noyes E. Alling, president; Arthur E. Alling, secretary and treasurer; Ernest M. Jaycox, assistant treasurer. The Stamford Rubber Co., of Stamford, is a separate corporation with \$4100 capital. Noyes E. Alling is president and Clarence E. Alling secretary and treasurer. The Alling Rubber Co., of Norwich—the parent house in this chain of stores—is owned by Wilbur S. Alling. The Alling Rubber Co., of Hartford, is a copartnership firm, consisting of Noyes E. Alling and Amos P. Mitchell, who purchased and succeeded the business of the Crown Rubber Co., in December last.

THE MUNGER AUTOMOBILE TIRE CO.

W. HOLT APGAR, who was appointed receiver for this company in November, 1902, acting under an order of chancery, will offer the effects of the company at public sale early in April, the date for which has not been fixed. The receiver's inventory places the assets of the company at \$5000, consisting of machinery, fixtures, and raw material. One of the principal creditors is the Trenton Rubber Manufacturing Co. The Munger company was incorporated in April, 1902.

ASBESTOS INTERESTS.

A PARTY representing the New England and Canadian Asbestos Co., a Maine corporation, the capital of which is held mainly around Fall River, Massachusetts, is now inspecting the asbestos properties acquired by the company in Canada. The party is accompanied by Professor T. N. Dale, of the United States geological survey, who is to supply a technical report. The capital of the company is \$1,500,000. G. Frank Allen is

president, F. E. Hathaway treasurer, and James H. Waring secretary—all of Fall River. Fred L. Smith, of Providence, R. I., and late of the Byfield Rubber Co., is a member of the board. The lands owned are in Broughton, Beaver, and Black Lake, province of Quebec, Canada. The company originally was interested in the asbestos mine at Eden, Vermont, which proved a failure.

UNITED STATES RUBBER CO.

THE fiscal year of the company, which ended on March 31, is generally understood to have been a very favorable one, as regards the volume of business done. The factories have been busily engaged throughout the year, and continue so, with large orders ahead. The annual meeting is due on Tuesday, May 19.—The following table represents the transactions in the company's shares on the New York Stock Exchange since our last report:

DATES.	COMMON.			PREFERRED.		
	Sales.	High.	Low.	Sales.	High.	Low.
Week ending Feb. 20	4,330	18½	17¼	3,210	55¼	54
Week ending Feb. 28	1,353	17½	17	555	54	53½
Week ending Mar. 7	2,090	16¾	15¾	610	53½	53
Week ending Mar. 14	1,993	16¼	15½	1,415	52½	51
Week ending Mar. 21	900	16¼	15¾	548	53	52
Week ending Mar. 28	1,300	15¾	15	510	53½	51½

RUBBER GOODS MANUFACTURING CO.

THE sixteenth regular quarterly dividend of 1¼ per cent. on the preferred shares, declared out of the company's earnings, was payable on March 16.—The fourth annual meeting of shareholders will be held at the registered offices of the company, in Jersey City, on Tuesday, April 14.—Recent transactions in the company's shares on the New York Stock Exchange have been as follows:

DATES	COMMON.			PREFERRED.		
	Sales.	High.	Low.	Sales.	High.	Low.
Week ending Feb. 20	17,650	30	28	1,730	84½	83½
Week ending Feb. 28	4,542	28½	27	1,090	84	83
Week ending Mar. 7	6,560	28	25¾	1,160	83	79½
Week ending Mar. 14	3,815	26¾	25	800	79	78
Week ending Mar. 21	2,222	26½	25½	1,092	79	78
Week ending Mar. 28	1,246	26½	25	510	78	77

A RUBBER FACTORY FIRE BRIGADE.

THE Eureka Fire Hose Co. have organized a factory fire brigade, composed of their employes, for the protection of their large plant at Jersey City, New Jersey, the "Rules and Regulations" governing which are printed in a neat pamphlet, a copy of which has been sent to THE INDIA RUBBER WORLD. This contains considerable data of interest to manufacturers generally, and the publication as a whole is a model one. The organization referred to is to consist of a chief, fire marshal, engineer, and six battalions, with a hose company, hook and ladder company, salvage corps, and the entrance guard.

MACHINERY BELTING FREE FOR TRIAL.

THE offer of Graton & Knight Manufacturing Co. (Worcester, Massachusetts), to send, free of charge, one of their superior oak tanned belts to any manufacturer who would like to test it, is attracting a good deal of favorable attention. The reputation of this fine old house is a guarantee of the excellence of their belting, and that they will in the minutest respect do exactly as they agree. Any of our readers who are interested in securing the best of belting at the lowest possible cost, would do well to write immediately to the Graton & Knight Manufacturing Co., accepting their offer as above.

THE RUBBER TRADE AT AKRON.

BY A RESIDENT CORRESPONDENT.

TO THE EDITOR OF THE INDIA RUBBER WORLD: The property of the People's Hard Rubber Co. was sold at public auction on March 16, by James W. Hoffert, assignee, and all the litigation growing out of the sale of the majority of the stock to Fritz Achelis and the subsequent assignment has been settled. There remains the filing in the probate court of the assignee's final account to make the People's company only a memory. After the hearing of the exceptions to the inventory made by the appraisers appointed directly after the assignment, which certain stockholders filed, had continued for three days before Judge Pardee, a settlement was reached on March 2. The exceptions were withdrawn and simultaneously the suits brought by the minority stockholders claiming damages because of the assignment were dismissed. The papers are endorsed: "Settled; cost paid, no record." It is understood that the minority stockholders received a little more than 55 cents on the dollar for their shares—approximately the same as was paid to the majority holders when the transfer of control was made in November last. There was but one bidder at the assignee's sale and the only bid was accepted. The real estate, appraised at \$49,150, was sold for \$80,000; the personal property, appraised at \$83,737.34, was sold for \$85,000. James F. Giles was the purchaser. No statement has been made as to what will be done with the plant. A part of the machinery has been removed to the Akron plant of the American Hard Rubber Co. [A statement regarding the transfer of control of the People's Hard Rubber Co. appeared in THE INDIA RUBBER WORLD of February 1, 1903—page 168.]

SOME other litigation of interest to the rubber trade was settled out of court here on March 18, in accordance, it is understood, with an agreement made in New York on the preceding day. Reference is made to three suits filed in May and June 1900, by the Goodyear Tire and Rubber Co., against the Consolidated Rubber Tire Co., the suits being all alike except for the amounts claimed, which aggregated about \$60,000. The Goodyear company's claims were for tires alleged to have been made on contract for the Consolidated company and delivered to them. The Consolidated company alleged that the tires were not made according to specifications; that they contained rubber of an inferior quality; and that their trade had been damaged by the marketing of these tires. They filed a cross petition for \$150,000 damages in consequence. The Goodyear Tire and Rubber Co., partially to secure their claim, attached a large quantity of tires which had been delivered to the Consolidated company at the latter's Akron establishment. Under this attachment the tires were sold, the Goodyear company purchasing them at 31 cents per pound, although the contract price for their manufacture had been 65 cents per pound. Further the Goodyear company garnisheed money due the Consolidated company from several licensees of the latter, and this case was carried through various steps to the supreme court of Ohio. This case will now be dismissed, as the original cases have been in the court of common pleas. The terms of the settlement are not made public. The court calendar shows: "Settled, each party to pay one half the costs; no record." It is understood from parties to both sides of the litigation, which has been very expensive, that the settlement cannot be called a victory for either side.—The litigation which has thus been ended was entirely apart from the suit of the Rubber Tire Wheel Co. against the Goodyear Tire and Rubber Co., for alleged infringement of the Grant solid tire patent, though the

two suits have been confounded in the minds of some people. Nothing has been done in this patent litigation since the United States supreme court on October 27, 1902, denied the application of the Rubber Tire Wheel Co. for a writ of *certiorari*, which, if granted, would have carried the case from the circuit court of appeals to the supreme court.

* * *

THE tire departments of the Akron rubber factories continue to be exceedingly busy places, and the demand is unabated. There is a slightly increasing call for cheaper automobile tires, but manufacturers say there is no difficulty in maintaining prices. For high grade automobiles only the best tires are wanted, and to obtain them the difference in cost cannot be taken into account. The demand for heavy, solid tires for fire department trucks, engines, and the like is growing. The greater number of such vehicles now manufactured are equipped with rubber tires, and in some cities the municipal officers are causing the steel tires now in use in their fire equipment to be replaced with rubber. The cost, however, deters many from making the change, as they question the advisability of spending money on apparatus which may be more or less out of date. In the purchase of new apparatus rubber tires are now specified by nearly every city in the country.

The proposal of a go-as-you-please automobile race from New York to Chicago, is interesting tire manufacturers. The reliability contests heretofore have been made to test the hill-climbing capacities of different machines more than anything else. The roads selected were generally good, save for the hills. A run from New York to Chicago would encounter very bad roads in places, and would probably prove the most severe test to which tires could be put. "I would like to see the proposed race run, though I doubt if any tire made would come out of it unscathed," said one leading manufacturer.

* * *

THE organization of a manufacturers' association which includes nearly, if not quite, all the large employing concerns of Akron and its vicinity, has been practically completed. The idea is not a new one, such an institution having been in existence at Dayton, Ohio, for some time, and other such organizations having been formed in a number of other cities within a few months past. The association is by no means confined to the rubber manufacturers, although of necessity it would not be a representative Akron organization if it did not include them. The purposes of the association are mutual helpfulness, and it is announced positively that worthy employes have nothing to fear by reason of its organization. The reduction of wages or oppression of labor in any manner is not contemplated, although boycotts and such other methods of intimidation as might be employed in case of difficulty between employers and employes will be guarded against. A secretary, whose entire time shall be given to the work of the organization, will be employed. The officers have not yet been chosen, but an Akron man well acquainted with the needs of employers in general will be the secretary.

* * *

The Firestone Tire and Rubber Co. are busy night and day in the factory which they equipped recently for the manufacture of their solid sidewire automobile tires. They have placed the solid tires on the drive wheels of a number of automobiles, the front wheels of which were equipped with pneumatic tires—a practice which is becoming common in this section.

As nearly half of Akron's population is identified in some way with rubber, it is not surprising that two men well known in connection with the industry here should be candidates in this spring's municipal election. Joseph Dangell, superintendent

ent of the local plant of the American Hard Rubber Co., has been nominated for councilman-at-large by the Republicans, while Alexander Adamson, proprietor of the Adamson machine shops, is the prohibition candidate for mayor. George S. Whitney, a foreman in the rubber plant of the Whitman & Barnes Rubber Manufacturing Co., has been nominated for councilman from the first ward by the Republicans.

The Diamond Rubber Workers' Relief Association was incorporated on March 17, under the laws of Ohio, with a view to including in its membership practically all the permanent factory and office employes of the Diamond Rubber Co. Members will pay monthly dues, to provide a fund for sick and death benefits, and relief for widows and orphans. H. S. Riddle, master mechanic of the Diamond Rubber Co., has been chosen president. William Metzler is vice president; George Rex, treasurer; John Staub, corresponding secretary; and H. S. Burgner, financial secretary. The employes of The B. F. Goodrich Co. have a similar institution in the White Anchor Relief Association, organized several years ago, and the employes of the Whitman & Barnes Manufacturing Co. likewise have a relief association.

Colonel F. M. Atterholt, of Akron, who is reported to be concerned with negotiations for combining the leading elastic webbing concerns of the country in a new \$5,000,000 company, assures THE INDIA RUBBER WORLD'S correspondent that the details are not yet definite enough to admit of publication. It is reported that some fourteen concerns, with factories located in New York, Connecticut, Rhode Island, and Massachusetts, are regarded as eligible for the proposed combination.

At a meeting of the Alden Rubber Co., on March 19, M. R. Hayne was elected a director in place of E. L. Toy, formerly vice president of the company. Mr. Toy retired from that office at the annual meeting of the company Feb. 4. He has mining interests in Tennessee which will claim his attention.

No definite arrangements have as yet been made for the national convention of the Amalgamated Rubber Workers to be held here in June. The local rubber workers' union will appoint committees, however, in a short time. In the recent Republican primary election W. E. Demming, a member of the local union, was defeated for nomination as councilman in the second ward. It is but fair to state, however, that the ward does not contain a large percentage of voters who are rubber workers.

Rumors are current connecting the name of C. H. Wheeler, former president of The India Rubber Co., with a new rubber factory project at Kent, Ohio (ten miles from Akron), and also with an undertaking for a new factory in Akron. Regarding these Mr. Wheeler said to THE INDIA RUBBER WORLD'S correspondent: "It is too early to talk for publication; I may have some information to impart in a few weeks."

T. W. Miller, treasurer and manager of The Faultless Rubber Co., went to California early in March to spend a month in business and pleasure on the Pacific coast.

The Camp Rubber Co. have purchased the abandoned plant of the Ashland Canning and Preserving Co., adjoining their factory at Ashland, Ohio, and are converting it into a factory for making boxes and cartons for their own use and for the trade. The Camp company are building an addition 50 X 100 feet, to be used as a milling room, and have purchased land on which a still larger addition will be erected later in the season.

The Williams Foundry and Machine Co. have begun the erection of a four-story brick addition, 60 X 40 feet, to their plant. They have been very busy of late in manufacturing regular and special machinery and molds for rubber factories and this, more than any other one thing, makes the addition

necessary, though Mr. J. K. Williams, president of the company, states that the enlarged quarters will be used for a general extension of all lines of their products. C. Franz, for eleven years freight agent of the Erie railroad at Akron, has become associated with the company.

H. B. Camp, president of the Faultless and of the Camp Rubber companies, is a director of the Lake and River Railroad Co., recently organized to construct a railroad from Lake Erie to the Ohio river.

The Diamond Rubber Co.'s reclaiming plant is exceptionally busy this season. They are reclaiming much more rubber for the trade now than formerly.

Mr. R. P. Marvin, secretary of The B. F. Goodrich Co., and Mr. E. C. Shaw, their general superintendent, left on March 9 to spend several weeks in Europe.

Although it is the season when, ordinarily, many young men and women from the surrounding towns and country come to Akron to work in the rubber factories, desirable help continues to be in steady demand. Akron manufacturers are careful to avoid the employment of boys and girls at an age when the law requires their attendance at school.

PERSONAL MENTION.

MR. JAMES BENNETT FORSYTH, general manager of the Boston Belting Co. (Boston), is back at his office after a brief illness, looking better in health than he has for months, the many warm congratulations that he is receiving from the whole trade showing in what esteem he is held by all who know him.

=Mr. Thomas G. Richards, superintendent of the Boston Woven Hose and Rubber Co. (Cambridge, Mass.), recently gave a very interesting lecture, illustrated with stereopticon views, on the manipulation of India-rubber as applied to mechanical rubber goods, before the Mechanical Engineering Society, at the Massachusetts Institute of Technology, Boston.

=Mr. William J. Cable, president of the Cable Rubber Co. (Jamaica Plain, Mass.), has purchased a fine residence at Forest Hills, one of the beautiful suburbs of Boston. His brother Samuel F. Cable, has purchased land adjoining and will build on it.

=Mr. Spencer R. Driffeld, president and manager of the Consumers' Rubber Co. (Cleveland, Ohio) was a recent caller at the office of THE INDIA RUBBER WORLD.

=Colonel Samuel P. Colt, Samuel Norris, and Lester Leland, of the United States Rubber Co., made a tour during the month of the mountains in the Carolinas.

=Mr. George A. Alden, founder of the firm of George A. Alden & Co. (Boston), spent the month of March in Florida.

=Dr. Carl Otto Weber, who was summoned to this country to do certain expert work in India-rubber, sailed for England on the *Lucania* the last of February.

=Mr. William L. Adams, a prominent rubber planter of Livingston, Guatemala, was recently married to Miss Mary E. Cuttriss, of New York, the bridal trip being to the country of the bridegroom's adoption.

=Mr. John P. Lyons, advertising manager of the United States Rubber Co. (New York) returned to his office during the last days of March, after an absence of five weeks due to illness with the grip.

=Now that the public are so vitally interested in Mexico, it may be well to remark that the largest line of photographs of scenery and types, and showing manners and customs of the Mexicans, particularly in the "hot country," have been secured by an enterprising American by the name of C. B. Waite, whose address is 1st San Cosme, 8 1/2 Mexico City.

GREAT TIRE PROMISES THAT FAILED.

THE "wheel and tire manufacturing of the world" do not appear yet to have been monopolized by The International Wheel, Tire, and Rubber Manufacturing Co., as was promised in their prospectus; quoted in part in THE INDIA RUBBER WORLD of November 1, 1902 [page 58]. The factory illustrated in their pamphlet, which was that of the New Brunswick Rubber Co. (later the New Brunswick Tire Co.), has been taken out of the hands of the company with the long name and restored to the former owners. The gentleman who, it was announced, would be manager at the factory, informs us that the persons making the promise to him "placed the promotion of the concern in the hands of sharpers, and they have been made victims in consequence."

The gentleman whose name appears as president in the original prospectus, and who is engaged in the manufacture of ice cream in New York, informs THE INDIA RUBBER WORLD that on accepting a position on the tire company's board, he made an investment in its shares; he then attempted to learn what the company was doing, failing in which he resigned and succeeded in getting his money back. The head of a large stove manufacturing company, who invested at the same time, was not able to draw out his money. The ice cream manufacturer states that the promoters first approached him with a proposition to amalgamate the ice cream business in New York, representing that they controlled \$1,000,000 for investment, and they obtained options on his and other businesses. The ice cream trust failed to materialize, however, and the promoters next proposed to invest their \$1,000,000 in the tire industry.

The International Wheel, Tire, and Rubber Manufacturing Co. had been incorporated under New Jersey laws, with \$3,000,000 capital authorized, and the promoters took this up. H. N. Field & Co., "brokers for the company," No. 180 Broadway, New York, advertised the shares (\$1 par) at 40 cents, guaranteeing a return of 2 per cent. per week, and are known to have made some sales to ladies out of town. It was announced in the prospectus that "You can borrow upon the certificates of this company as much as you can on real estate," and it now appears that, after the purchasers of stock had begun to get dissatisfied, another concern appeared, offering to lend money on the shares—a very small proportion of their face value—and that possession of the shares was thus gained by the parties originally selling them. The purchasers are now without any basis upon which to bring suits.

On March 5 James B. Kellogg, who had been at liberty under \$40,000 bail, pending an appeal from a sentence of 7½ years imprisonment for his part in what is known as "the E. S. Dean swindle," of the "get-rich-quick" class, was arrested in New York, charged with fraudulent use of the mails. One item in the charge was that as "H. N. Field & Co." he unloaded shares of the International tire company, while as "E. Rice & Co." he obtained possession of the shares again, by lending small amounts on them. Somewhat similar tactics were employed in the case of the "Pacific Rubber Co." fraud exposed in these pages last year, and it is not impossible that the same operators were engaged in the latter, which purported to be a rubber planting enterprise.

A hearing in the case of Kellogg, on the affidavit charging him with complicity in the International Wheel, Tire, and Rubber Manufacturing Co. fraud, was set for March 31, in New York. An inquiry made by a representative of this journal, at the former advertised offices of the tire company, was answered by the janitor of the building: "I think all that is abolished now." The office of "H. N. Field & Co." is also closed.

THE TEXTILE GOODS MARKET.

MARCH has been an eventful month in textile circles. The Cotton Exchange has been the chief center of attraction, and the goods market has reflected the condition of raw material so sensitively that consumers of cotton cloth have greatly restricted their operations, in the hope of a decline in prices all around. At this writing the raw material market is off nearly a half cent from the price one month ago, but for a fortnight prices have not advanced or declined materially.

The Southern spot markets have been exceedingly firm and daily reports from those quarters have encouraged speculators to favor the bull side. The strong statistical position of the staple is still very much commented upon. Each week reduces the visible supply, as compared with the total a year ago, and the mills are steadily consuming an uncommonly large amount of cotton. Prices have been high enough to draw cotton from the south and it is understood that nearly 30,000 bales of low grade cotton are now en route to New York for delivery on March contracts. Following figures show the price of spot cotton at the various ports at the close of each week in March:

	New York.	New Orleans.	Liverpool.
March 7	9 95c.	9 58c.	5.22d
March 14	10c.	9½c.	5.30d
March 21	10 40c.	9¾c.	5.42d
March 28	10 05c.	9 ⅞c.	5.32d

The finished goods division of the market has experienced its ups and downs also, but there has been no greater purchasing factor during the month than the rubber manufacturer. It was not to be expected that the present time would see an abnormal, or even a normal, demand for cottons from this source, and yet selling agents report a very good volume of trade all through the month. As announced at the outset, the strong position of raw material has wielded a marked influence over goods, and prices for finished cottons have been commensurately high. This, however, does not affect rubber manufacturers who contracted for their cloth by the year.

Prices for light-weight cottons used by the footwear manufacturers have not changed, but there has been no weakness in evidence. At present sellers show an inclination to restrict their sales on certain lines on account of the prospective strike at the Lowell mills. Not that any of these goods are made in Lowell, but the shutting out of the market of Lowell products will turn the tide of demand toward other goods and create a scarcity, which is an easy matter when it is considered that the Southern mills are well sold up.

The hose and belting trades have been making formidable requisitions on the manufacturers of cotton ducks, thus showing that the rubber trade is fully up to anticipations. Notwithstanding the duck manufacturers have recently increased their facilities, they are still unable to keep up with the demand. From indications at hand it is believed that the rubber mills are going to exceed the outside limit of consumption. That is to say, that the amount stipulated in their contracts for the year are not going to be sufficient to carry them through the season, and they will, in many cases, go beyond the limit.

Felt manufacturers have had a fair call from the manufacturers of rubber boots, and most of the mills are in possession of sufficient business from this source to keep their machinery going for a number of weeks. Prices have not changed.

Prices for light-weight cottons, such as are used by the footwear manufacturers, are current in this market as follows:

Forty-inch Majestic C. C.	63½ cents.
Forty-inch Majestic B. B. O.	61½ cents.
Forty-inch Majestic B. B.	61½ cents.
Forty-inch, Eleaney	5½ cents.
Thirty-six inch, India	5½ cents.

REVIEW OF THE CRUDE RUBBER MARKET.

CURRENT quotations correspond very closely with those presented in this column a month ago, though meanwhile lower prices have prevailed at times, with a less firm market than at present. The decline referred to reflected the situation at Pará, where, on account of very large arrivals at Manáos, together with unfavorable news from the consuming centers, a feeling of apathy prevailed, causing a smaller demand and lower values. With more free buying for consumption, however, there has been an improvement in prices in all centers, notwithstanding the heavy receipts at Manáos which followed the removal of obstacles to the shipment of rubber from the Acre district.

This district is an important contributor to the supply of what is known as Purús rubber, and political conditions there have a direct bearing upon the yield of this grade of rubber. In 1898 the official estimate of the Acre output was 2000 tons; in 1899 it was 1150 tons; and in 1900 not more than 800 tons, the decrease being due to the attempts of the rubber collectors to segregate the region of the Acre from Bolivia, and form a separate republic. The failure of this attempt was followed by an increased rubber production, amounting to over 2000 tons in 1901—which again declined during the recent troubles between Brazil and Bolivia, one result of which was the closing of the Amazon to shipments from the Acre from August last to February 20 of the present year. There is no means of knowing how much rubber awaited shipment from the Acre on the last date mentioned, and this element of the present season's crop remains a matter for conjecture. It would not be surprising, however, if the total arrivals up to June 30 should equal those of last year, which were the heaviest ever recorded. Arrivals at Manáos for the first seven months of the crop year indicated a shortage of 2164 tons compared with the same period of the preceding year, but by the end of February this shortage had been reduced to 755 tons, since which time receipts have continued in good volume.

Arrivals of India-rubber (including Caucho) at Pará during each of the last three crop years have been as follows, in tons, in addition to which is given a column comparing the receipts of the present year, up to the end of each month, with those of last season:

	1900-01.	1901-02.	1902-03.	This year's Crop.
To July 31.....	860	1,260	1,290	30 more
To Aug. 31.....	2,150	2,550	2,660	110 "
To Sept. 30.....	3,430	4,490	4,330	160 less
To Oct. 31.....	5,780	7,130	6,610	520 "
To Nov 30.....	7,980	10,100	9,260	840 "
To Dec. 31.....	11,300	13,630	12,250	1,380 "
To Jan. 31.....	13,740	17,490	14,740	2,750 "
To Feb. 28.....	17,030	20,870	19,500	1,370 "
To March 31.....	21,820	24,530	*23,260	*1,270 "
To April 30.....	24,350	26,070		
To May 31.....	26,024	28,750		
To June 30.....	27,610	30,000		

[* To March 23, 1903.]

It is not alone from the Amazon valley that good arrivals have been reported. Early in the year attention was called to the small stocks at Antwerp and the comparatively small receipts for several months preceding. The Antwerp statistics which appear on another page indicate that arrivals from the Congo are becoming greater, but in spite of this prices for Congo sorts are being well maintained, and as this paper goes to press it is understood that the bids in hand for the large inscription sale at Antwerp of March 31 are fully up to the brokers' estimations on the rubber to be exposed. Bids for large

amounts, as usual, have been sent from the United States.

Consumption in all the leading countries is well maintained and in this connection it may be of interest to note the volume of imports from all sources into the United States during the first eight months of several fiscal years:

	1899-00.	1900-01.	1901-02.	1902-03.
Pounds.....	33,032,662	31,999,711	32,891,798	34,519,484

Arrivals at New York continued on a large scale, the receipts from Pará alone exceeding by 500,000 pounds the receipts in the same month of last year. Reports from the rubber factories in every branch are that they are exceptionally busy.

New York quotations on March 30 were:

PARÁ.		CENTRALS.	
Islands, fine, new.....	@83	Esmeralda, sausage.....	@68
Islands, fine, old.....	@	Guayaquil, strip.....	@62
Upriver, fine, new.....	@91	Nicaragua, scrap.....	@67
Upriver, fine, old.....	@95	Panama, slab.....	@55
Islands, coarse, new.....	@57	Mexican, scrap.....	@67
Islands, coarse, old.....	@	Mexican, slab.....	@55
Upriver, coarse, new.....	@73	Mangabeira, sheet.....	@52
Upriver, coarse, old.....	@		
Caucho (Peruvian) sheet.....	@55	EAST INDIAN.	
Caycho (Peruvian) ball.....	@68	Assam.....	
AFRICAN.		Borneo.....	@
Sierra Leone, 1st quality.....	@79	GUTTA-PERCHA.	
Massai, red.....	@79	Prime, red.....	@2 25
Benguella.....	@66	Prime, white.....	@1.50
Cameroon ball.....	@61	Lower grades.....	75
Gaboon flake.....	@38	Rebilled, prime.....	@.90
Gaboon lump.....	@41	Rebilled, inferior.....	@.25
Niger paste.....	@21		
Accra flake.....	@21	Balata, sheet.....	@65
Accra buttons.....	@59	Balata, block.....	@55
Accra strips.....	@59	Pontianak (in quanti- ties).....	@ 3½
Lopori ball, prime.....	@82	Almeidina.....	@ 8
Lopori strip, do.....	@80	Tuno gum.....	@12
Ikelemba.....	@82	Chicle.....	@42
Madagascar, pinky.....	@78		

Late Pará cables quote:

	Per Kilo.		Per Kilo.
Islands, fine.....	\$550	Upriver, fine.....	\$500
Islands, coarse.....	\$700	Upriver, coarse.....	\$800

Exchange, 12½d.

Last Manáos advices:

Upriver, fine.....	\$250	Upriver, coarse.....	\$350
--------------------	-------	----------------------	-------

Exchange, 12½d.

NEW YORK RUBBER PRICES FOR JANUARY (NEW RUBBER).

	1903.	1902.	1901.
Upriver, fine.....	86@92	77@86	87 @92
Upriver, coarse.....	71@76	62@65	65 @69
Islands, fine.....	84@89	75@81	84 @88
Islands, coarse.....	53@62	47@52	48 @52
Cametá, coarse.....	55@64	50@52½	53½@55

NEW YORK RUBBER PRICES FOR FEBRUARY (NEW RUBBER).

	1903.	1902.	1901.
Upriver, fine.....	84@90	72@79	85½@88
Upriver, coarse.....	70@73	60@63	63 @66
Islands, fine.....	82@87	69@76	83 @85
Islands, coarse.....	50@54	45@48	45½@48
Cametá, coarse.....	52@57	48@50	52½@54

Rubber Scrap Prices.

NEW YORK quotations—prices paid by consumers—are practically unchanged, as follows:

Old Rubber Boots and Shoes—Domestic.....	7½ @ 7½
Do —Foreign.....	6½ @ 6½
Pneumatic Bicycle Tires.....	5½
Solid Rubber Wagon and Carriage Tires.....	6½
White Trimmed Rubber.....	9½ @ 9½
Heavy Black Rubber.....	4½
Air Brake Hose.....	2½ @ 3
Fire and Large Hose.....	2½
Garden Hose.....	1½
Matting.....	1

Statistics of Para Rubber (Excluding Caucho).

	NEW YORK.			Total 1903.	Total 1902.	Total 1901.
	Fine and Medium.	Coarse.				
Stocks, January 31	223	30 =	253	1339	652	
Arrivals, February	986	623 =	1609	1381	1083	
Aggregating	1209	653 =	1862	2720	1735	
Deliveries, February	926	637 =	1563	2016	1040	
Stocks, February 28 ..	283	16 =	299	704	695	

	PARÁ.			ENGLAND.		
	1903.	1902.	1901.	1903.	1902.	1901.
Stocks, Jan. 31	155	510	715	1050	1230	1075
Arrivals, February	4740	3075	2945	1110	1105	925
Aggregating	4895	3585	3660	2160	2335	2000
Deliveries, February ..	4865	2535	3100	1025	725	975
Stocks, Feb. 28 ..	30	1030	560	1145	1610	1025

	1903.	1902.	1901.
World's supply, February 28	3945	5327	4277
Pará receipts, July 1 to February 28	17,801	18,839	15,863
Pará receipts of Caucho, same dates	1709	1696	1167
Afloat from Pará to United States, Feb. 28 ..	1188	1073	1070
Afloat from Pará to Europe, February 28	1283	910	927

Paris.

GUSTAVE JOB & CO., 110, rue Denfert-Rochereau, is the style and address of a new firm engaged in the importation of crude India-rubber, Gutta-percha, and colonial products. The direction will be in the hands of Mr. Job, who has had nine years experience in the rubber trade in the north of Brazil and three years in England.

Rubber Receipts at Manaus.

DURING February and for the first eight months of the crop season [by courtesy of Messrs. Witt & Co.] :

FROM—	FEBRUARY.			JULY-FEBRUARY.		
	1903.	1902.	1901.	1903.	1902.	1901.
Rio Pará	1838	1224	2081	4473	5110	4531
Rio Madeira	360	421	201	1838	2281	1990
Rio Juruá	786	349	823	2801	2689	2158
Rio Javary—Iquitos ..	78	40	165	1330	1012	1021
Rio Solimões	89	118	175	1165	1392	969
Rio Negro	124	72	106	449	259	303
Total	3275	2224	3631	12056	12752	10972
Caucho	571	213	752	1767	1826	1559
Total	3846	2437	4383	13823	14578	12531

London.

EDWARD TILL & CO., March 2, report stocks:

	1903.			1902.			1901.		
	Pará sorts.	Borneo.	Assam and Rangoon.	Other sorts.	Pará.	Other sorts.	Pará.	Other sorts.	Other sorts.
LONDON	27	134	38	20	1151	1602	1036	1108	
LIVERPOOL	191	423	646		568	881	1108		
Total	220	595	845						
Total, United Kingdom	1939	3078	2989						
Total, February 1	1921	2674	3129						
Total January 1	1582	2794	2901						
Total, December 1	2083	2525	3061						
Total, November 1	2337	2602	3040						
Total, October 1	2464	2802	2846						

PRICES PAID DURING FEBRUARY.

	1903.	1902.	1901.
Pará fine, hard cure ..3/6 @3/9	3/- @3/4	3/6 3/8 @3/8 1/2	3/7 3/8 @3/8 1/2
Do soft cure ..3/5 1/2 @3/9		2/- @2/0 1/2	2/7 @2/0 1/2
Negroheads, Islands. 2/2 1/2 @2/4 1/2	2/6 1/4 @2/7 1/2	2/7 @2/0 1/2	3/8 1/2
Do scrappy. 2/10 @3/0 1/2	3/1 @3/2		
Bolivian			

MARCH 13.—The market for Pará sorts has further reacted on pressure to sell, prices declining 1/4d. to 1d. per pound, but only moderate

business has been done, including fine hard down to 3s. 8 1/2d. spot and 3s. 9 1/2d. forward. Soft cure has been neglected, with sales down to 3s. 9d. spot and 3s. 9 1/2d. forward. Negroheads quiet, with sales of scrap-py at 3s. 1 1/2d. @ 3s. 1 1/4d.; old Cametás at 2s. 6d.; and Islands, 2s. 4d. Peruvian: Sales of fine at 3s. 9d.; ball at 2s. 11 1/2d. @ 2s. 11 1/4d.; slab value, 2s. 4d. Mollendo scarce and wanted at 3s. 8 1/2d. Medium sorts are in very small supply and desirable lots sell well. Red rubbers are dearer and Mozambique very scarce. At to day's auction small supplies were brought forward and only part sold at steady prices. Mollendo: fine, 3s. 1 1/2d.; entrefine, 3s. 6 1/2d.; negroheads, 2s. 10 1/2d. Colombian: clean dry fresh sheets, 3s. 1d. Central American: fine clean pressed sheet, 3s. 2 1/2d. Mangabeira; good thin Santos sheets, 2s. 6d. Mozambique: Uganda gummy balls, 2s. 3d. Assam: red slightly mixed, 2s. Penang: fair red selected but a little mixed, 2s. 9d. Nyasaland: fine ball, 3s. 4d., ordinary 2s. 6 1/4d.

Balata—Venezuela block: 120 bales retired at 2s. per pound.

CEYLON RUBBER (PARÁ QUALITY.)

February 27, sales at auction, 28 packages. Fine thin biscuits, 3s. 10d. @ 4s. 2 1/2d.; scrap, 3s. @ 3s. 4 1/2d.

March 13, sales of 19 packages. Fine thin biscuits, 4s. 2d. @ 4s. 2 1/2d.; thicker squares, 4s.; fine pale scrap, 3s. 5 1/2d. @ 3s. 0 1/2d.; mixed scrap, 3s. @ 3s. 3 1/4d. [The highest quotation here equalled \$1.02 1/2 per pound, while best quotations above for rubber from Pará equal 92 1/4 cents per pound.]

Liverpool.

ON February 27, at the Liverpool court of bankruptcy, a receiving order was made out on the petition of S. Kramisch and Frederick Stern, trading since 1894 as Kramisch & Co., India-rubber merchants, at The Albany, Old Hall street, Liverpool. At a meeting of creditors on February 24, a statement was read, from which it appeared that there were liabilities of £111,663 11s., and assets only estimated to produce £7089 18s. 11d., leaving a deficiency of at least £104,573 12s. 1d. [= \$508,920.62]. The greatest sufferers are certain banking houses who have been advancing money or rubber.

WILLIAM WRIGHT & Co. report [March 2] :

Fine Pará.—In anticipation of heavy receipts, prices declined somewhat at the early part of the month; this decline was further helped by the failure of a local dealer. The market has since recovered, and closes firm at 1d. per pound above prices ruling at the end of last month. Manufacturers must bear in mind that we are now near the end of the heavy months' receipts, and that the present statistical position, coupled with an active demand and a decided shortage in medium grades, will justify a further advance in the near future; this advance, in our opinion, is extremely probable. In Pará and Manóas the market has been extremely active at advancing prices, closing with strong buyers of Up-river at the parity of 3s. 10d., and of Islands, 3s. 9d., delivered here.

EDM. SCHLÜTER & Co. report Liverpool stocks:

	Jan. 31.	Feb. 28.	Jan. 31.	Feb. 28.
Pará—1st hands ..	642	735 tons.	Africans, ...	432 355 tons.
Fine	451	566 "	Peruvians, ...	84 161 "
Medium	49	68 "	Mollendo, ...	61 59 pkg.
Negroheads	142	101 "	Mangabeira, ...	13 9 "
Pará—2d hands ..	403	416 "	Pernambuco, ...	133 113 "
Fine	356	344 "	Manicoba, ...	936 233 "
Medium	22	19 "	Ceará, ...	321 113 "
Negroheads	25	53 "		

Hamburg.

FOR the advancement of Hamburg as a rubber market, the firm of August Bolten, successors to William Miller, ship-brokers, Hamburg, has induced the Hamburg-America Line and the Hamburg-South America Steamship Co. to establish a regular service to and from North Brazil (Amazon river, Pará, Manóas, Ceará, and Maranhão). After the English steamer lines have withdrawn from the Continent, after a stubborn competitive fight, purchases of rubber can be made now much cheaper in Hamburg and Havre than in Liverpool, as the Hamburg companies are bringing the rubber direct from Pará and

Manaos to Hamburg and Havre, and, according to contract with the English lines, at the same freight rates as there to Liverpool. In purchasing rubber at Liverpool, therefore, a surplus of freight from there to Hamburg or Bremen has to be paid, amounting to from 8 to 9 marks, which increases the price of a ton of rubber considerably. The needs of rubber can therefore be filled now cheaper in Hamburg than in Liverpool. —*Gummi Zeitung.*

Antwerp.

TO THE EDITOR OF THE INDIA RUBBER WORLD: During last month two rubber sales took place, the first of which, on February 13, embracing about 50 tons, influenced by a temporary weakness of the Liverpool market, showed somewhat irregular and partially lower prices. The regular monthly sale on February 20 indicated a stronger tendency of the market. The small quantity offered—152 tons—no doubt contributed to this result, and prices were 2½ per cent. above valuations. The more important lots sold were:

	Valuation.	Sold at
35 tons Aruwimi.....	francs 8.05	8.40
12 " Aruwimi.....	8.40	8.45
30 " Mongalla, strips.....	8.30	8.47½
13 " Yengu (Upper Congo).....	8.75	8.75 @ 8.80

On March 6 there was sold to arrive, per steamer *Anversville*, 155 tons Lopori, at very full figures, viz.: 120 tons first grade at 9.15 francs; 15 tons second grade at 8.65 francs; and 20 tons third grade at 8.35 francs, per kilogram. The last prices paid for Lopori I had been 8.30 @ 8.50 francs, on December 19 last.

The next monthly sale has been announced for March 31, the quantity to be exposed amounting to 450 tons, of the usual Congo sorts.

The small sale on March 13, when 26 tons were offered, besides 30 to 40 tons to arrive from now until the end of June, passed off without noticeable change in prices. The *Anversville* arrived yesterday from the Congo, with 517 tons, of which 151 tons of the Lopori mentioned above have already been sold, so that the available quantity to be sold in April amounts thus far only to 366 tons.

C. SCHMID & CO.

Antwerp, March 13, 1903.

REGULAR SALE OF MARCH 31.

KARCHER & Co. report the broker's estimations for the following principal lots to be exposed on the above date:

11,334 kilos Kasai red I.....	francs 9.15
9,890 " Kasai red (second Loanda type).....	8.40
13,152 " Kasai black (very good condition).....	8.75
3,535 " Kasai (Sankuru) ball.....	8.65
8,575 " Congo Djuma ball.....	7.50
9,791 " Lower Congo—cakes from thimbles.....	7.25
17,498 " Lower Congo—thimbles, medium.....	4.25
10,886 " Lake Leopold II—small cut pieces.....	8.75
27,847 " Lake Leopold II—large pieces.....	6.90
24,490 " Upper Congo—ordinary.....	8.50
70,655 " Upper Congo—Uelé.....	8.25
11,184 " Upper Congo—red twists.....	8.65
18,225 " Upper Congo Aruwimi—clean and strong.....	8.70
43,100 " Upper Congo—ordinary.....	8.60
29,669 " Upper Congo—Uelé strips.....	8.35
26,855 " Upper Congo—Aruwimi good quality.....	8.60
3,536 " Lower Congo thimbles.....	5.25
21,903 " Upper Congo Mongalla—small strips clean.....	8.45
5,045 " Katanga balls and cut balls.....	8.
9,504 " Upper Congo Isangl.....	7.75
5,911 " Conakry niggers.....	5.50
1,048 " Soudan twists.....	8.75
6,637 " Kamerun cut pieces.....	8.40
4,150 " Mattogrosso virgin.....	9.25

RUBBER ARRIVALS AT ANTWERP.

FEB. 19.—By the *Albertville*, from the Congo:

Bunge & Co.....	(Société Générale Africaine) kilos 142,000
Do.....	(Chemins de fer des Grand Lacs) 2,600
Do.....	(Société Isangl) 14,000

Do.....	(Société Anversoise) 25,600
Do.....	(Société Spécial Katanga) 5,900
Société Coloniale Anversoise.....	(Belge du Haut Congo) 7,300
Do.....	(Cie. de Lomami) 4,000
Do.....	(Sud Kamerun) 6,700
Do.....	(Various parties) 4,000
Comptoir des Produits Coloniaux.....	(Cie. de la N'Goko) 1,100
Cie. Commerciale des Colonies.....	(Cie. Française du Congo) 1,300
L. & W. Van de Velde.....	(Cie. du Kassai) 17,000 231,500

MARCH 12.—By the *Anversville*, from the Congo:

Bunge & Co.....	(Société Générale Africaine) kilos 255,000
Do.....	(Chemins de fer des Grand Lacs) 16,800
Do.....	(Société Anversoise) 10,000
Do.....	(Comite Spécial Katanga) 5,300
Do.....	(Société Isangl) 1,700
Do.....	(Sultanats du Haut Ubangi) 1,500
Do.....	(Société "La Koto") 800
Société A B I R.....	(Sold to arrive) 151,000
M. S. Cols.....	(Société L'Ikelemba) 1,000
Société Coloniale Anversoise.....	(Société La Lulonga) 7,300
Do.....	(Various companies) 1,000
Do.....	(Cie. de Lomami) 15,000
L. & W. Van de Velde.....	(Cie. du Kassai) 38,000
Société Coloniale du Baniembe.....	1,000
Société Agricole & Commerciale de l'Alima.....	1,400
Charles Dethier.....	(La Haut Sangha) 2,300
Do.....	(Société Belgika) 2,200
Do.....	(Cie. de la M'Foko) 2,800
Comptoir des Produits Coloniaux.....	(Cie. de la Kadeia Sangha) 1,800
Do.....	(Cie. de la l'Ekela Sangha) 800
Evrard Havenith.....	(Andrea) 600 517,300

[Equal to 1,138,060 pounds.]

ANTWERP RUBBER STATISTICS FOR JANUARY.

DETAILS.	1903.	1902.	1901.	1900.	1899.
Stocks, Jan. 1.....	658,105	414,709	614,039	291,991	263,340
Arrivals in January.....	171,860	636,243	543,626	475,870	285,833
Congo sorts.....	136,541	613,876	443,073	430,996	255,412
Other sorts.....	35,319	22,367	100,553	44,884	30,421
Aggregating.....	829,965	1,050,952	1,157,665	767,871	549,173
Sales in January.....	695,830	407,253	509,034	225,773	250,662
Stocks, Jan. 31.....	134,135	643,699	648,631	542,098	298,511
Arrivals since Jan. 1.....	171,860	636,243	543,626	475,880	285,833
Congo sorts.....	136,541	613,876	443,073	430,996	255,412
Other sorts.....	35,319	22,367	100,553	44,884	30,421
Sales since Jan. 1.....	695,830	407,253	509,034	225,773	250,662

ANTWERP RUBBER STATISTICS FOR FEBRUARY.

DETAILS.	1903.	1902.	1901.	1900.	1899.
Stocks, Jan. 31.....	134,135	643,699	648,631	542,098	298,511
Arrivals in February.....	545,813	607,015	459,632	884,156	226,031
Congo sorts.....	473,713	587,293	431,425	712,413	202,646
Other sorts.....	72,100	19,822	28,207	171,743	23,385
Aggregating.....	679,948	1,250,814	1,108,263	1,426,254	524,542
Sales in February.....	204,410	265,994	327,163	807,454	274,231
Stocks, Feb. 28.....	475,538	984,820	781,100	618,800	250,311
Arrivals since Jan. 1.....	717,673	1,243,358	1,003,258	1,360,036	511,864
Congo sorts.....	610,234	1,201,169	874,498	1,143,409	458,058
Other sorts.....	107,439	42,189	128,760	216,627	53,806
Sales since Jan. 1.....	900,240	673,247	836,197	1,033,227	524,893

Para.

AN agreement to settle the Acre dispute without arms having been reached by Brazil and Bolivia, the suspension of free transit of Bolivian goods on the Amazon, which had existed since August 8, 1902, was removed by the Brazilian government on February 20, 1903. Pending arbitration, rubber from the Acre will be regarded as Bolivian rubber in transit—and hence not subject to the Brazilian export duty—though the decision on this point by the central government of Brazil

was strongly opposed by the state governor at Manáos. Meanwhile the proceeds of the export duties levied in the district of production will be divided equally between Bolivia and Brazil. A correspondent writes regarding certain rubber which, after paying duty to the Bolivian authorities, was again taxed at Manáos: "The duties imposed upon transit rubber by the Manáos authorities have not yet been refunded, partly perhaps on account of the impecuniosity of the Manáos exchequer, which, despite its large revenue, suffers from chronic exhaustion."

IMPORTS FROM PARA AT NEW YORK.

[The Figures Indicate Weights in Pounds.]

March 5.—By the steamer *Dominic*, from Manáos and Pará:

IMPORTERS.	Fine.	Medium.	Coarse.	Caucho.	Total
New York Commercial Co.	341,000	68,100	105,300	13,100	527,500
A. T. Morse & Co.	259,100	58,500	74,500	27,800	419,900
Poel & Arnold.	198,400	44,900	45,900	15,100	304,300
United States Rubber Co.			34,100	21,900	56,000
William Wright & Co.	34,600	2,800	17,200		54,600
Lawrence Johnson & Co.	31,600	5,000			41,600
Edmund Reeks & Co.	24,500	3,700	9,400		37,600
Hagemeyer & Brunn.	10,100	2,300	4,500		16,900

PARA RUBBER VIA EUROPE.

POUNDS.	POUNDS.
MARCH 6.—By the <i>City of Washington</i> =Mollendo:	
New York Commercial Co. (Fine).....	7,000
New York Commercial Co. (Coarse).....	1,000 8,000
MARCH 13.—By the <i>Alliance</i> =Mollendo:	
John M. Parr's Sons (Fine).....	5,000
John M. Parr's Sons (Coarse).....	1,500 6,500
MARCH 13.—By the <i>Germanic</i> =Liverpool:	
William Wright & Co. (Fine).....	22,000
George A. Alden & Co. (Fine).....	11,000 33,000
MARCH 16.—By the <i>Ivornia</i> =Liverpool:	
Poel & Arnold (Fine).....	22,500
George A. Alden & Co. (Fine).....	14,000 36,500
MARCH 21.—By the <i>Cedric</i> =Liverpool:	
George A. Alden & Co. (Coarse).....	7,000
Poel & Arnold (Coarse).....	4,500 11,500
MARCH 23.—By the <i>Etruria</i> =Liverpool:	
George A. Alden & Co. (Fine).....	15,000
Poel & Arnold (Coarse).....	15,000 30,000

OTHER ARRIVALS AT NEW YORK

CENTRALS.

POUNDS.	POUNDS.
FEB. 24.—By the <i>St. Paul</i> =London:	
Poel & Arnold.....	7,000
FEB. 25.—By the <i>Valencia</i> =Carthage:	
Guterman, Rosenfeld & Co.....	2,100
Kunhardt & Co.....	700
Lawrence Johnson & Co.....	500 3,700
FEB. 26.—By the <i>Segurana</i> =Colon:	
Hirzel, Feltman & Co.....	10,000
Isaac Brandon & Bros.....	2,900
American Trading Co.....	1,000
G. Amsinck & Co.....	700 14,600
FEB. 27.—By the <i>El Sud</i> =New Orleans:	
A. T. Morse & Co.....	7,500
Manhattan Rubber Mfg. Co.....	6,000
A. N. Rotholz.....	1,500 15,000
MARCH 2.—By the <i>Monterey</i> =Mexico:	
E. Steiger & Co.....	1,000
Graham, Hinkley & Co.....	1,500
Harburger & Stack.....	1,000
Thebaud Brothers.....	500
F. Probst & Co.....	1,000
Willard, Hawes & Co.....	600
H. Marquardt & Co.....	1,200
L. N. Chemedlin & Co.....	500 7,300
MARCH 3.—By the <i>Alta</i> =Carthage:	
J. H. Recknagel & Co.....	5,000
Jimenez & Escobar.....	1,200
Lawrence Johnson & Co.....	1,500
Kunhardt & Co.....	300
A. D. Straus & Co.....	100 8,100
MARCH 5.—By the <i>Buffon</i> =Bahia:	
Booth & Co.....	4,000
MARCH 6.—By the <i>City of Washington</i> =Colon:	
Samper & Co.....	9,800
G. Amsinck & Co.....	7,400
Roldan & Van Sickle.....	3,500
L. N. Chemedlin & Co.....	3,500

L. Hageners & Co.....	4,300	2,400=	6,700
-----------------------	-------	-------	-------	--------	-------

Total 903,600 185,300 298,300 77,900=1,465,100

March 13.—By the steamer *Polycarp*, from Manáos and Pará:

New York Commercial Co.	312,600	84,200	105,300	28,300	=	530,400
Poel & Arnold.....	151,100	20,000	77,100	67,500	=	315,700
A. T. Morse & Co.....	66,500	29,800	61,500	122,300	=	280,100
William Wright & Co.....	13,600	2,100	49,000		=	64,700
United States Rubber Co.....			45,500		=	45,500
Edmund Reeks & Co.....	11,400	2,000	7,000	9,900	=	30,300
L. Hageners & Co.....	11,000		10,400		=	21,400
Hagemeyer & Brunn.....	1,600		10,300		=	11,900

Total..... 567,800 138,100 366,100 228,000=1,300,000

March 23.—By the steamer *Hubert*, from Manáos and Pará:

A. T. Morse & Co.....	203,300	52,600	89,300	26,800	=	372,000
New York Commercial Co.	205,100	32,700	63,800	8,300	=	309,900
Poel & Arnold.....	128,500	58,200	55,700	15,300	=	257,700
Edmund Reeks & Co.....	13,400	3,400	9,400	42,300	=	68,500
Hagemeyer & Brunn.....	23,200	6,400	4,200	8,100	=	41,900
United States Rubber Co.....	700		41,100	1,200	=	43,000
L. Hageners & Co.....	7,000	700	7,300		=	15,000
William Wright & Co.....			3,200		=	3,200

Total..... 581,200 154,000 274,000 102,000=1,111,200

[NOTE.—The *Amazonense* is due at New York on April 1, with 555 tons of Rubber and 25 tons Cauchó.]

CENTRALS—Continued.

Hirzel, Feltman & Co.....	2,600
Silva Bussenius & Co.....	2,400
Isaac Brandon & Bros.....	2,300
American Trading Co.....	2,100
A. M. Capen Sons.....	2,100
Lawrence Johnson & Co.....	2,000
Piza, Nephews & Co.....	1,900
Andreas & Co.....	1,600
W. R. Grace & Co.....	1,300
Dumarest & Co.....	1,300
Kunhardt & Co.....	1,000
E. B. Strout.....	1,200
Eggers & Heinlein.....	1,100
Everett, Heaney & Co.....	400
J. Menendez & Co.....	400
For Antwerp.....	3,300 51,300

MARCH 9.—By the *Santiago de Cuba*=Mexico:

H. Marquardt & Co.....	2,500
American Trading Co.....	1,000
Samuels & Cummings.....	500
Smithers, Nordenholt & Co.....	700 4,700

MARCH 9.—By the *Umbria*=Liverpool:

Poel & Arnold.....	5,500
--------------------	-------

MARCH 9.—By the *Philadelphia*=London:

Poel & Arnold.....	16,200
--------------------	--------

MARCH 11.—By the *Alleghany*=Greytown:

E. B. Strout.....	5,000
G. Amsinck & Co.....	1,500
A. D. Straus & Co.....	2,400
C. Wessels & Co.....	100 10,100

MARCH 11.—By the *Hevelius*=Bahia:

J. H. Rossbach & Bros.....	13,000
----------------------------	--------

MARCH 13.—By the *Alliance*=Colon:

Hirzel, Feltman & Co.....	5,000
G. Amsinck & Co.....	1,400
Eggers & Heinlein.....	1,100
Fidanque Bros. & Co.....	900
Jimenez & Escobar.....	800
Joseph Hecht.....	300 9,500

MARCH 13.—By the *Germanic*=Liverpool:

George A. Alden & Co.....	9,300
Poel & Arnold.....	2,200 11,500

MARCH 14.—By the *Esperanza*=Mexico:

Harburger & Stack.....	2,500
American Trading Co.....	500
E. Steiger & Co.....	700
E. N. Tibbals & Co.....	500 5,200

MARCH 16.—By the *Ivornia*=Liverpool:

Otto Meyer.....	18,000
-----------------	--------

MARCH 16.—By the *Comus*=New Orleans:

Manhattan Rubber Mfg. Co.....	5,000
W. Loalza & Co.....	3,000
A. T. Morse & Co.....	2,500
Eggers & Heinlein.....	500 11,000

MARCH 17.—By the *Alene*=Savannah:

Samper & Co.....	5,500
Lawrence Johnson & Co.....	2,000
Graham, Hinkley & Co.....	500 8,000

MARCH 17.—By the *Vigilancia*=Mexico:

H. Marquardt & Co.....	1,700
American Trading Co.....	700

CENTRALS—Continued.

E. N. Tibbals & Co.....	400
Samuels & Cummings.....	200 3,000
MARCH 23.—By the <i>Corby Castle</i> =Bahia:	
J. H. Rossbach & Bros.....	20,000
Booth & Co.....	8,000 28,000
MARCH 24.—By the <i>Valencia</i> =Greytown:	
A. D. Straus & Co.....	5,000
Jimenez & Escobar.....	5,000
Kunhardt & Co.....	5,000
Guterman, Rosenfeld & Co.....	1,000
G. Amsinck & Co.....	500
E. B. Strout.....	500
Andreas & Co.....	500 17,500

AFRICANS.

POUNDS.	POUNDS.
FEB. 24.—By the <i>Etruria</i> =Liverpool:	
Otto Meyer.....	9,000
George A. Alden & Co.....	5,000
Poel & Arnold.....	16,000 30,000
FEB. 24.—By the <i>Belgravia</i> =Hamburg:	
George A. Alden & Co.....	13,000
A. T. Morse & Co.....	5,000 18,000
FEB. 24.—By the <i>Dona Maria</i> =Lisbon:	
Poel & Arnold.....	38,000
FEB. 27.—By the <i>Patria</i> =Lisbon:	
George A. Alden & Co.....	22,500
MARCH 2.—By the <i>Celtic</i> =Liverpool:	
George A. Alden & Co.....	11,500
A. T. Morse & Co.....	7,000
Poel & Arnold.....	2,500 21,000
MARCH 2.—By the <i>Pennsylvania</i> =Hamburg:	
A. T. Morse & Co.....	27,000
Poel & Arnold.....	16,000 43,000
MARCH 2.—By the <i>Campania</i> =Liverpool:	
George A. Alden & Co.....	44,000
Otto Meyer.....	14,000
Poel & Arnold.....	7,000
A. T. Morse & Co.....	7,000 72,000
MARCH 5.—By the <i>Oceanic</i> =Liverpool:	
George A. Alden & Co.....	34,000
Poel & Arnold.....	22,500
Otto Meyer.....	6,500 63,000
MARCH 10.—By the <i>Bluecher</i> =Hamburg:	
A. T. Morse & Co.....	23,000
Otto Meyer.....	12,500
George A. Alden & Co.....	8,000 43,500
MARCH 10.—By the <i>Mtnschah</i> =London:	
George A. Alden & Co.....	6,000
MARCH 11.—By the <i>Finland</i> =Antwerp:	
A. T. Morse & Co.....	11,500
Poel & Arnold.....	12,800 24,000
MARCH 13.—By the <i>Germanic</i> =Liverpool:	
Poel & Arnold.....	13,000
George A. Alden & Co.....	10,000
A. T. Morse & Co.....	5,000 28,000
MARCH 16.—By the <i>Ivornia</i> =Liverpool:	
Poel & Arnold.....	25,000
W. H. Cummings Sons.....	13,000 28,000

AFRICANS—Continued.

MARCH 17.—By the <i>Ryndam</i> =Rotterdam:	
A. T. Morse & Co.....	11,500
Poel & Arnold.....	4,500
MARCH 17.—By the <i>Vaderland</i> =Antwerp:	
Poel & Arnold.....	14,000
Otto Meyer.....	3,800
New York Commercial Co.....	1,500
MARCH 21.—By the <i>Cedric</i> =Liverpool:	
Poel & Arnold.....	23,000
George A. Alden & Co.....	4,000
Karle Brothers.....	0,000
MARCH 23.—By the <i>Etruria</i> =Liverpool:	
Poel & Arnold.....	37,000
MARCH 23.—By the <i>Pretoria</i> =Hamburg:	
A. T. Morse & Co.....	10,000

EAST INDIAN.

FEB. 25.—By the <i>Orono</i> =Singapore:	
William Wright & Co.....	7,500
Windmuller & Reolker.....	8,000
Poel & Arnold.....	4,500
MARCH 6.—By the <i>Adria</i> =Singapore:	
William Wright & Co.....	8,000
MARCH 19.—By the <i>Mogul</i> =Singapore:	
Poel & Arnold.....	7,000
Winter & Smille.....	7,000
William Wright & Co.....	3,000
PONTIANAK.	
FEB. 21.—By the <i>Indraradi</i> =Singapore:	
Robert Brans & Co.....	255,000
George A. Alden & Co.....	90,000
Poel & Arnold.....	88,000
William Wright & Co.....	57,000

EAST INDIAN—Continued.

FEB. 25.—By the <i>Orono</i> =Singapore:	
J. H. Recknagel & Co.....	41,000
Poel & Arnold.....	26,000
MARCH 6.—By the <i>Adria</i> =Singapore:	
Poel & Arnold.....	103,000
J. H. Recknagel & Co.....	95,000
George A. Alden & Co.....	50,000
MARCH 12.—By the <i>Croydon</i> =Singapore:	
William Wright & Co.....	280,000
George A. Alden & Co.....	50,000
MARCH 19.—By the <i>Mogul</i> =Singapore:	
Poel & Arnold.....	180,000
Robert Brans & Co.....	200,000
William Wright & Co.....	200,000
George A. Alden & Co.....	35,000

GUTTA-PERCHA AND BALATA.

FEB. 20.—By the <i>Dotie</i> =Liverpool:	
Lawrence Johnson & Co.....	11,500
FEB. 21.—By the <i>Indraradi</i> =Singapore:	
Robert Brans & Co.....	22,500
MARCH 4.—By the <i>Minneapolis</i> =London:	
To order.....	20,000
MARCH 6.—By the <i>Adria</i> =Singapore:	
Poel & Arnold.....	2,000
MARCH 10.—By the <i>Patria</i> =Hamburg:	
To order.....	20,000
MARCH 19.—By the <i>Mogul</i> =Singapore:	
Robert Brans & Co.....	23,000
BALATA.	
MARCH 6.—By the <i>Maravaj</i> =Trinidad:	
George A. Alden & Co.....	7,000
Baley, Billing & Co.....	800

MARCH 21.—By the *Cedric*=Liverpool:

New York Commercial Co.....	3,000
To Order.....	2,600

CUSTOM HOUSE STATISTICS.

PORT OF NEW YORK—FEBRUARY.

Imports:	POUNDS.	VALUE.
India-rubber.....	4,573,324	\$3,376,101
Gutta-percha.....	34,448	12,700
Gutta-jelutong (Pontianak) ..	913,380	29,004
Total.....	5,551,122	\$3,418,955

Exports:

India-rubber.....	42,676	\$30,008
Reclaimed rubber.....	52,367	6,310
Rubber Scrap Imported.....	1,142,062	\$66,577

BOSTON ARRIVALS.

FEB. 6.—By the <i>Sylvania</i> =Liverpool:	POUNDS
Poel & Arnold—African.....	2,200
FEB. 9.—By the <i>Cambrian</i> =London:	
Poel & Arnold—Balata.....	10,600
FEB. 16.—By the <i>Iowa</i> =Liverpool:	
Poel & Arnold—African.....	22,500
FEB. 18.—By the <i>Ullonia</i> =Liverpool:	
Poel & Arnold—African.....	9,800
FEB. 25.—By the <i>Virginia</i> =London:	
George A. Alden & Co.—East Indian...	2,600
FEB. 25.—By the <i>Vaderland</i> =Antwerp:	
George A. Alden & Co.—African.....	167,944
[Included in New York arrivals, February 18.]	
Total Imports.....	210,312
[Value, \$139,577.]	

FEBRUARY EXPORTS OF INDIA-RUBBER FROM PARA (IN KILOGRAMS).

1000 KILOGRAMS=2204.6 POUNDS.

EXPORTERS.	UNITED STATES.					EUROPE.					TOTAL
	FINE.	MEDIUM.	COARSE.	CAUCHO.	TOTAL.	FINE.	MEDIUM.	COARSE.	CAUCHO.	TOTAL.	
Cmok, Schrader & Co.....	32,470	11,050	84,840	—	128,360	36,380	5,100	29,260	12,000	82,740	211,100
Frank da Costa & Co.....	24,266	5,874	208,465	3,470	242,075	65,048	5,874	11,376	10,090	92,388	334,466
Adelbert H. Alden.....	76,530	27,740	84,401	—	188,671	37,000	5,320	3,300	5,208	50,728	239,399
Singlehurst, Brocklehurst & Co.	—	—	—	—	—	2,078	215	2,505	—	5,608	5,608
Neale & Staats.....	3,015	167	33,920	9,920	47,022	2,702	170	3,634	28,356	34,862	81,884
Denis Crouan & Co.....	9,640	1,360	17,371	—	28,371	23,504	4,351	6,164	—	34,019	62,390
B. A. Antunes & Co.....	5,780	1,930	4,335	1,200	13,145	7,246	4,858	2,887	—	14,991	28,136
Pires, Teixeira & Co.....	20,689	—	16,121	—	36,810	3,724	—	1,947	—	5,671	42,481
Sundry small shippers.....	1,558	—	7,156	5,431	14,195	10,631	933	15,332	6,081	32,978	47,173
Direct from Iquitos.....	—	—	—	—	—	119,166	22,916	60,605	114,251	316,938	316,938
Direct from Manaos.....	968,192	241,211	242,629	217,585	1,669,617	1,153,258	142,477	140,486	362,995	1,804,126	3,473,743
Total for February.....	1,142,140	289,332	699,141	237,656	2,368,269	1,466,637	192,214	277,397	538,891	2,475,139	4,843,408
Total, January.....	702,613	157,954	573,902	123,847	1,558,316	693,787	79,698	265,732	137,234	1,176,391	2,734,707
Total, July-December.....	2,724,574	649,906	2,172,215	78,623	5,625,318	4,011,602	609,423	1,113,862	500,474	6,235,361	11,860,679
TOTAL, CROP YEAR.....	4,569,327	1,097,192	3,445,258	440,126	9,551,903	6,171,966	881,335	1,656,991	1,176,599	9,886,891	19,438,794

OFFICIAL STATISTICS OF CRUDE INDIA-RUBBER (IN POUNDS).

UNITED STATES.				GREAT BRITAIN.			
MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.	MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
January, 1903.....	5,881,341	191,006	5,690,335	January, 1903.....	5,278,784	4,229,344	1,049,440
January, 1902.....	6,273,939	172,106	6,101,833	January, 1902.....	4,702,208	2,965,200	1,737,008
January, 1901.....	4,448,785	364,743	4,084,042	January, 1901.....	5,819,856	2,674,672	3,145,184
January, 1900.....	5,528,830	268,225	5,260,605	January, 1900.....	4,552,976	2,965,616	1,627,360

GERMANY.				AUSTRIA-HUNGARY.			
MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.	MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
January, 1903.....	3,012,020	1,161,360	1,850,660	January, 1903.....	260,920	220	260,700
January, 1902.....	2,581,920	1,056,000	1,525,920	January, 1902.....	223,960	220	223,740
January, 1901.....	2,256,760	400,180	1,856,580	January, 1901.....	140,800	440	140,360
January, 1900.....	2,885,080	1,410,860	1,474,220	January, 1900.....	—	—	—

NOTE.—German statistics include Gutta-percha, Balata, old rubber, and substitutes. Austrian figures include Gutta-percha. The exports from the United States embrace the supplies for Canadian consumption.

3.
—
00

K.
01
80
94
—
05

08
10
77

05

00

00

00

00

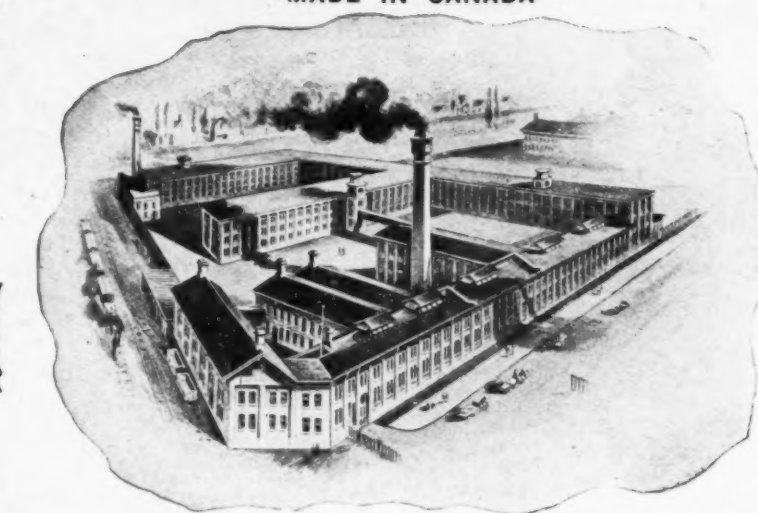
044
—
312
—
—
—
—
00
66
99
98
84
90
36
81
73
38
743
—
408
707
579
—
794
—
—
—
TS.
0
8
4
00
—
—
TS.
0
0
0
0
—
—
lited

HIGH GRADE RUBBER GOODS

(MADE IN CANADA)

BELTING
PACKINGS
VALVES
VALVE SHEET
TUBING
and
GASKETS

SUPERIOR
.. IN ..
QUALITY



Sole Manufacturers of the celebrated "MALTESE CROSS" and "LION" Brands Rubbers.
The best fitting, best wearing and most stylish rubber footwear on the market.

SPECIAL ATTENTION GIVEN TO EXPORT ORDERS

RUBBER HOSE

-FOR-

WATER
SUCTION
STEAM
AIR
Fire Protection
ACIDS
BREWERS
Pneumatic Tools

SATISFACTORY
.. IN ..
SERVICE



The Gutta Percha & Rubber Mfg. Co. of Toronto Ltd.

Mention The India Rubber World when you write.

Head Office Warerooms—45-49 Front St., W., TORONTO, CANADA.

- - THE - -

GRANBY RUBBER CO.

HIGHEST GRADE

RUBBER BOOTS, SHOES, AND CLOTHING.

Factories: GRANBY, QUEBEC.

S. H. C. MINER, President,
J. H. McKECHNIE, Gen'l Mgr.

Mention The India Rubber World when you write.

BOUND VOLUMES

- - OF - -

THE INDIA RUBBER WORLD

Make a desirable addition to the office equipment or the private library of any man who is interested in any branch of the rubber business.

The twelve monthly numbers from October, 1901, to September, 1902, inclusive, have been bound in half Morocco, forming a handsome and durable volume.

Price, \$5.00, Prepaid.

Back volumes at the same price.

THE INDIA RUBBER PUBLISHING CO.,
No. 150 Nassau Street, New York.

GORHAM RUBBER COMPANY,

Manufacturers and Distributors for the Pacific Coast and the Orient

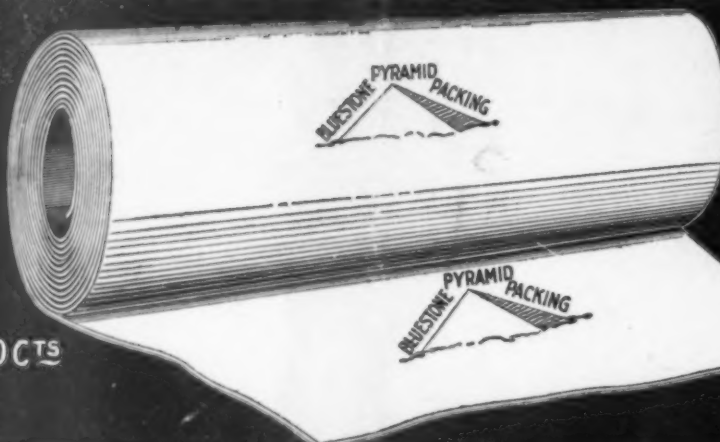
OF RUBBER GOODS OF EVERY DESCRIPTION.

MAIN OFFICE: SAN FRANCISCO, CALIF. BRANCH: SEATTLE, WASHINGTON.

Mention The India Rubber World when you write.

PYRAMID BRAND BLUESTONE HIGH PRESSURE PACKING

FOR STEAM &
HOT OR COLD
WATER &
AND AIR &
PACKS EQUALLY
WELL FOR ALL
PRICE PER LB. 80 CTS



THERE IS NO
PACKING MADE
THAT WILL LAST
AS LONG OR WITH-
STAND AS WELL
THE ACTION
OF STEAM
HEAT

THE GUTTA PERCHA AND RUBBER MANUFACTURING CO.

NEW YORK
126-128 DUANE ST.

CHICAGO
96-98 LAKE ST.

SAN FRANCISCO
30-32 FREMONT ST.

BOSTON
71 PEARL ST.

PHILADELPHIA, PA.
221 CHESTNUT ST.

**SIX YEARS YOUNG
AND STILL GROWING**

Growing in Quality
of Product
Growing in Sales
Growing in Popularity
Not made by a TRUST

**HOOD RUBBER COMPANY
BOSTON**

Mention The India Rubber World when you write.

1856 — FORTY-SEVEN YEARS — 1903

EXPERIENCE

TYRIAN DRUGGISTS' RUBBER GOODS

OF ALL DESCRIPTIONS.

RUBBER MOULD WORK A SPECIALTY.

**TYER RUBBER COMPANY,
Andover, Mass.**

Mention The India Rubber World when you write.

03

S

NY,